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TCRP Synthesis 31

Paratransit Contracting and Service Delivery Methods

A Synthesis of Transit Practice

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Synthesis of Transit Practice 31

Paratransit Contracting and Service Delivery Methods

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TRANSIT COOPERATIVE RESEARCH PROGRAM

The nation's growth and the need to meet mobility, environmental, and energy objectives place demands on public transit systems. Current systems, some of which are old and in need of upgrading, must expand service area, increase service frequency, and improve efficiency to serve these demands. Research is necessary to solve operating problems, to adapt appropriate new technologies from other industries, and to introduce innovations into the transit industry. The Transit Cooperative Research Program (TCRP) serves as one of the principal means by which the transit industry can develop innovative near-term solutions to meet demands placed on it.

The need for TCRP was originally identified in *TRB Special Report 213—Research for Public Transit: New Directions*, published in 1987 and based on a study sponsored by the Federal Transit Administration (FTA). A report by the American Public Transit Association (APTA), *Transportation 2000*, also recognized the need for local, problem-solving research. TCRP, modeled after the longstanding and successful National Cooperative Highway Research Program, undertakes research and other technical activities in response to the needs of transit service providers. The scope of vice configuration, equipment, facilities, operations, human resources, maintenance, policy, and administrative practices.

TCRP was established under FTA sponsorship in July 1992. Proposed by the U.S. Department of Transportation, TCRP was authorized as part of the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA). On May 13, 1992, a memorandum agreement outlining TCRP operating procedures was executed by the three cooperating organizations: FTA, the National Academy of Sciences, acting through the Transportation Research Board (TRB), and the Transit Development Corporation, Inc. (TDC), a nonprofit educational and research organization established by APTA. TDC is responsible for forming the independent governing board, designated as the TCRP Oversight and Project Selection (TOPS) Committee.

Research problem statements for TCRP are solicited periodically but may be submitted to TRB by anyone at anytime. It is the responsibility of the TOPS Committee to formulate the research program by identifying the highest priority projects. As part of the evaluation, the TOPS Committee defines funding levels and expected products.

Once selected, each project is assigned to an expert panel, appointed by the Transportation Research Board. The panels prepare project statements (requests for proposals), select contractors, and provide technical guidance and counsel throughout the life of the project. The process for developing research problem statements and selecting research agencies has been used by TRB in managing cooperative research programs since 1962. As in other TRB activities, TCRP project panels serve voluntarily without compensation.

Because research cannot have the desired impact if products fail to reach the intended audience, special emphasis is placed on disseminating TCRP results to the intended end-users of the research: transit agencies, service providers, and suppliers. TRB provides a series of research reports, syntheses of transit practice, and other supporting material developed by TCRP research. APTA will arrange for workshops, training aids, field visits, and other activities to ensure that results are implemented by urban and rural transit industry practitioners.

The TCRP provides a forum where transit agencies can cooperatively address common operational problems. TCRP results support and complement other ongoing transit research and training programs.

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The members of the technical advisory panel selected to monitor this project and to review this report were chosen for recognized scholarly competence and with due consideration for the balance of disciplines appropriate to the project. The opinions and conclusions expressed or implied are those of the research agency that performed the research, and while they have been accepted as appropriate by the technical panel, they are not necessarily those of the Transportation Research Board, the Transit Development Corporation, the National Research Council, or the Federal Transit Administration of the U.S. Department of Transportation.

Each report is reviewed and accepted for publication by the technical panel according to procedures established and monitored by the Transportation Research Board Executive Committee and the Governing Board of the National Research Council.

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PREFACE

A vast storehouse of information exists on many subjects of concern to the transit industry. This information has resulted from research and from the successful application of solutions to problems by individuals or organizations. There is a continuing need to provide a systematic means for compiling this information and making it available to the entire transit community in a usable format. The Transit Cooperative Research Program includes a synthesis series designed to search for and synthesize useful knowledge from all available sources and to prepare documented reports on current practices in subject areas of concern to the transit industry.

This synthesis series reports on various practices, making specific recommendations where appropriate but without the detailed directions usually found in handbooks or design manuals. Nonetheless, these documents can serve similar purposes, for each is a compendium of the best knowledge available on those measures found to be successful in resolving specific problems. The extent to which these reports are useful will be tempered by the user's knowledge and experience in the particular problem area.

FOREWORD

*By Staff
Transportation
Research Board*

This synthesis will be of interest to transit agency general managers, their special services planning staffs, as well as to any others dealing with transit agencies' provision of ADA paratransit services. It offers information from selected transit agencies about the operational practices used to provide ADA paratransit services and identifies factors perceived by transit personnel to have influenced the selection of service delivery methodology. It focuses on the state of the practice in paratransit contracting and service delivery methods to comply with ADA paratransit provisions.

Administrators, practitioners, and researchers are continually faced with issues or problems on which there is much information, either in the form of reports or in terms of undocumented experience and practice. Unfortunately, this information often is scattered or not readily available in the literature, and, as a consequence, in seeking solutions, full information on what has been learned about an issue or problem is not assembled. Costly research findings may go unused, valuable experience may be overlooked, and full consideration may not be given to the available methods of solving or alleviating the issue or problem. In an effort to correct this situation, the Transit Cooperative Research Program (TCRP) Synthesis Project, carried out by the Transportation Research Board as the research agency, has the objective of reporting on common transit issues and problems and synthesizing available information. The synthesis reports from this endeavor constitute a TCRP publication series in which various forms of relevant information are assembled into single, concise documents pertaining to a specific problem or closely related issues.

This report of the Transportation Research Board was designed to provide insight on the range of contracting experiences to date, as well as on the range of agency assessments of efficiency and effectiveness of contract arrangements and of the factors influencing methodology selection.

To develop this synthesis in a comprehensive manner and to ensure inclusion of significant knowledge, available information was assembled from numerous sources, including a number of public transportation agencies. A topic panel of experts in the subject area was established to guide the researchers in organizing and evaluating the collected data, and to review the final synthesis report.

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This study was managed by Donna L. Vlasak, Senior Program Officer, who worked with the consultant, the Topic Panel, and the J-7 project committee in the development and review of the report. Assistance in Topic Panel selection and project scope development was provided by Sally D. Liff, Senior Program Officer. Linda S. Mason was responsible for editing and production. Cheryl Keith assisted in meeting logistics and distribution of the questionnaire and draft reports.

Gwen Chisholm, Senior Program Officer, assisted TCRP staff in project review.

Information on current practice was provided by many transit agencies. Their cooperation and assistance were most helpful.

PARATRANSIT CONTRACTING AND SERVICE DELIVERY METHODS

SUMMARY

The difficulties encountered in providing cost-efficient and effective ADA paratransit services are causing transit agencies to review their arrangements for service provision. Little has been known about the range of service delivery practices or the factors that influenced their selection. This study was undertaken to determine the state of paratransit contracting and service delivery methods in compliance with the ADA paratransit provisions and to identify factors that influenced decisions made in selecting those methods. A survey questionnaire was used to collect information and case studies were developed from interviews with five selected transit agencies that responded to the survey.

Completed surveys were received from 28 transit agencies, a 48 percent response rate, in 16 states, primarily serving urban communities. Responses were considered highly representative of the larger agencies and under-representative of transit agencies serving communities with populations less than 50,000.

Most respondents contract all or a portion of their paratransit services to the private sector. There is a growing tendency to bring some of the program responsibilities in-house. Selected survey findings indicated that financial pressures have encouraged the majority of respondent transit agencies to seek an expanded role for the private sector in paratransit provision. Rising demand has increased the use of multiple private operators, while there is a decreased use of nonprofit providers in the communities surveyed. The use of coordinated paratransit service delivery programs was primarily limited to the smaller agencies.

Cost is the major factor driving decisions about paratransit service delivery methods. The other major determinants are responsiveness (equipment availability, ability to respond rapidly), experience with paratransit service delivery, and control over service delivery, quality and usage. The larger agencies are also concerned about eliminating labor union conflict over Section 13c of the Federal Transit Act. As a result increased numbers of transit agencies are handling their own reservation and scheduling to control demand and have implemented performance standards, incentives, penalties, and monitoring practices to control quality. Many agencies have established formal customer complaint procedures, but generally all passengers are encouraged to register service and driver complaints. Transit agencies are continuing to evolve their methodology for providing paratransit services. Some agencies are reconsidering direct operation using lower paid unionized labor.

Recommendations for further study include:

- A comprehensive national research study of public transit agencies' ADA compliance and paratransit contracting and service delivery methods, paying particular attention to models in which paratransit and fixed-route modes are coordinated and integrated;
- Further study of transit agencies that are using unionized, lower-wage drivers to directly operate ADA paratransit services;
- A survey of paratransit users perceptions of paratransit service quality;

- Development of strategies to facilitate information exchange about paratransit service delivery among transit agencies, including a best practices manual; and
- A review of available technology to improve the efficiency and effectiveness of ADA paratransit service delivery.

INTRODUCTION

BACKGROUND

Access to public transportation is essential to independent living for individuals with disabilities. It facilitates mobility for employment, education, health and medical services, leisure activities, and other community living activities. In particular, for individuals who lack the ability to use fixed-route transportation, access to paratransit services is critical for meeting their mobility needs. The public transit provisions of the Americans with Disabilities Act of 1990 (ADA) (42 U.S.C. 12101 et seq.) call for mandatory accessible fixed-route systems and comparable complementary paratransit services for individuals with disabilities who cannot use accessible fixed-route services.

Comparability is measured in terms of four service criteria: 1) ADA paratransit services must equal fixed-route services in terms of service area and days and hours of service; 2) Fares cannot exceed twice the fixed-route passenger fare; 3) Reservation systems should allow for next-day service; and 4) Trip purpose restrictions and capacity constraints should be eliminated. ADA paratransit programs should have achieved full compliance with these criteria by January 26, 1997, unless granted a voluntary compliance agreement by the Department of Transportation Federal Transit Administration (FTA).

Under the ADA, paratransit services are not intended to serve as a comprehensive system of transportation for individuals with disabilities, but rather as a "safety net" to ensure transportation equity for individuals with disabilities for whom it is appropriate (1). Eligibility for ADA paratransit is based on one's functional ability to use accessible fixed-route services, defined according to federal categories and determined by stringent Department of Transportation (DOT) regulations. These regulations specify not only who qualifies to use ADA paratransit service, but also under what circumstances; eligibility is supposed to be determined on a trip-by-trip basis. To facilitate this process, transit agencies were required to establish eligibility determination procedures that strictly limit ADA complementary paratransit services to individuals with disabilities who need it. However, even with the publishing of federal categories and guidelines, determining ADA paratransit eligibility can be complex, often resisting precise measurement, and is politically sensitive. Research is currently underway by the Transit Cooperative Research Program (TCRP) to examine methods and issues surrounding determining ADA paratransit eligibility (2).

According to the American Public Transit Association (APTA), the majority (82 percent) of public fixed-route operators were providing some level of paratransit services for passengers with disabilities before the enactment of the ADA (3). However, the changes required by the ADA have had a major effect on the administrative and operational aspects of these

paratransit programs. In addition to the mandatory service criteria, ADA paratransit programs are subject to numerous regulatory policies, increased administrative responsibilities, and trip-based eligibility (4). ADA has significantly improved and expanded the delivery of public paratransit services. Enhanced ADA paratransit services and the outreach and marketing required by the ADA have generated greater demand by people with disabilities (1). Pre-ADA paratransit trips were reported at 20 million per year, in comparison to current estimates of 48 to 55 million annual paratransit trips (5). In many transit agencies, ADA paratransit demand has far outstripped supply.

As a result, implementation of the ADA paratransit provisions has been problematic for the public transit industry, characterized by complex operational and budgetary challenges (6). Traditionally, paratransit service provision has been inefficient because it is labor intensive, achieves low productivity, and generates minimal passenger revenue. Compliance with the ADA paratransit requirements has increased administrative and operational expenses, while demand by passengers with disabilities has increased and continues to grow (6). To further exacerbate the situation, federal operating assistance is steadily declining.

In the face of paratransit cost increases and federal financial assistance decreases, transit agencies are realizing the importance of developing innovative demand management strategies, such as improved methods for determining eligibility, targeted marketing and outreach activities, and fixed-route travel training programs. Recognizing that appropriate cost-effective paratransit service delivery could also serve to reduce the financial impact of the ADA, public transit operators have become increasingly concerned about efficiency and maximizing resources. Transit agencies are searching for strategies that will maintain service quality, balance supply with user demand, and reduce the net costs of service delivery.

In efforts to minimize costs, many have implemented paratransit-to-fixed-route feeder programs, service routes, community circulator bus systems, and various forms of deviated fixed-route bus service. Some have switched entirely to demand-responsive service delivery, eliminating the traditional fixed-route mode (7). The limited availability of funding has also induced transit operators to review and reassess their methods for paratransit service delivery. Increasing numbers of transit agencies are seeking greater efficiencies in paratransit service provision through the use of less expensive paratransit providers. Contrary to research that concluded that transit agencies would not increase the use of private carriers for paratransit service provision, privatization seems to be on the rise (8). Increased numbers of transit agencies have entered into contractual arrangements with private vendors to meet their federal paratransit obligations. However, information on

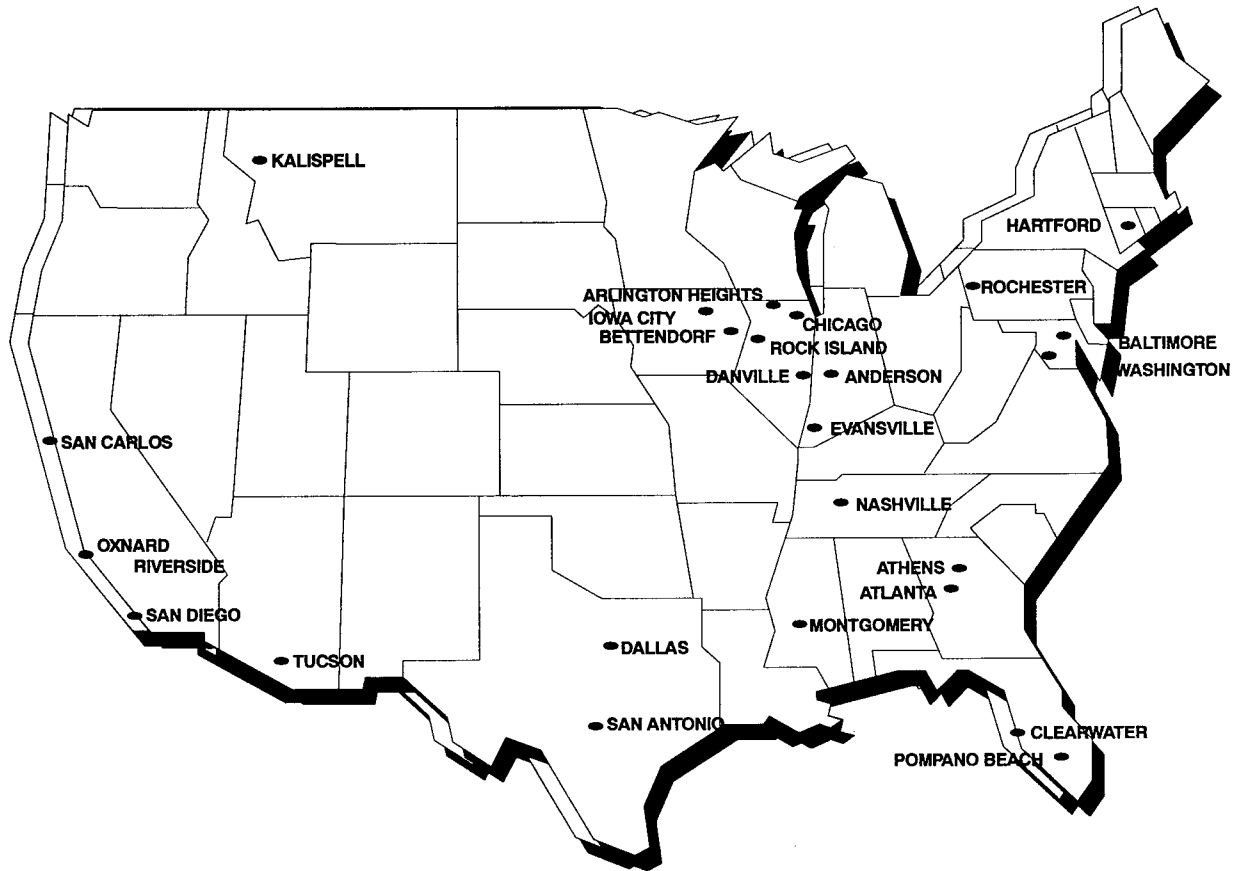


FIGURE 1 Map of survey responses.

these practices is limited. Few studies currently exist that describe the range of these contractual arrangements and the decision factors that influenced their selection.

PURPOSE AND OVERVIEW OF THE SYNTHESIS

This synthesis project was designed to provide insight into the operational practices employed by public transit operators to provide ADA paratransit services. Specifically, the research was undertaken to compile information on the range of contracting experiences to date, transit agencies' assessments of the efficiency and effectiveness of these arrangements, and the factors that influenced their selection.

Methodology

The study was conducted in two phases. The first phase involved a survey of public transit agencies to identify paratransit contracting practices and service delivery methods used to comply with the ADA paratransit provisions. A survey questionnaire, developed by the researcher, was distributed to 58 public transit fixed-route operators that provide ADA

paratransit services. Figure 1 details the geographic range of the sample. Transit agencies were stratified by size and randomly selected from the population of 554 public fixed-route operators required to provide ADA paratransit services. Table 1 describes responding agencies by size and Table 2 shows the types of communities they serve. The survey was conducted during a 3-week period in February 1997. Twenty-eight transit agencies completed and returned the surveys, representing a response rate of 48 percent of the sample selected and 5 percent of the population of fixed-route operators. Responses were analyzed using descriptive statistics.

In the second phase of the study, five agencies were selected from the respondent pool for interviews to solicit in-depth information about their paratransit programs and contractual arrangements. This information was used to develop profiles of these selected transit agencies to provide examples of paratransit contracting and service delivery methods, including

- scope of work and general contract elements;
- cost of service basis per hour/per trip;
- accountability and management control;
- service standards;
- incentives and disincentives;
- quality assurance;

TABLE 1
RESPONSES BY TRANSIT AGENCY SIZE*

	Number of Transit Agencies	Number of Responses	Percent of All Transit Agencies	Percent of All Responding Agencies
Nonurbanized Under 50,000	149	2	1.3	7
Small Urban 50,000–199,99	289	10	3.4	36
Mid-size Urban 200,000–99,999	91	6	6	21
Large Urban 1,000,000 or greater	<u>34</u>	<u>10</u>	29	<u>36</u>
Total Transit Agencies Responding	554	28		100

*Population categories based on National Transit Summaries and Trends for the 1991 Section 15 Report Year, FTA (1993).

TABLE 2
TYPE OF COMMUNITIES SERVED BY RESPONDENT TRANSIT AGENCIES

Type of Community	Percent of Responses	Number of Transit Agencies
Urban	61	17
Suburban	7	2
Rural	7	2
Urban	21	6
Urban, Suburban and Rural	<u>4</u>	<u>1</u>
Total	100	28

- safety and reliability; and
- facility and equipment control.

Organization of the Report

This synthesis contains descriptions of the paratransit contracting and service delivery methods identified, including detailed information about the transit agencies responding, paratransit programs, contracts, performance, and quality assurance strategies. A review of the literature is presented in

chapter 2. Chapter 3 describes paratransit contracting and service delivery methods used by the responding agencies and the factors that influenced their choices. Chapter 4 describes the paratransit programs and cost factors. Contract elements and performance standards are presented in chapter 5. Chapter 6 presents strategies for ensuring reliable services and program evaluations. Case studies are presented in chapter 7. The report concludes with a discussion of the findings and recommendations for further research in chapter 8. Appendix A contains the survey instrument. Appendix B is a list of respondents.

REVIEW OF THE LITERATURE

Paratransit services, originally defined as surface transportation alternatives that fall in between conventional fixed-route transit and the personal automobile, use smaller vehicles, such as small buses and vans, taxicabs and/or sedans to provide demand-responsive transportation (9). Paratransit is usually a shared-ride service that is provided either door-to-door, curb-to-curb, or door-through-door. Subsequent to the passage of the ADA, paratransit services are defined as demand-responsive public transportation comparable to fixed-route service that is available to eligible individuals whose disabilities prevent them from using accessible fixed-route services. ADA paratransit services are available by reservation or subscription, and usually on a shared-ride basis.

TYPES OF PARATRANSIT SERVICE DELIVERY

There is considerable diversity in the manner in which paratransit services are provided. Some public transit agencies operate their own paratransit services exclusively, some contract out all paratransit service and management to private transportation companies, and others use various combinations of both methods. The following discussion describes the most commonly used methodologies.

Direct Operation

Direct operation refers to paratransit services that are provided “in-house” by public transit agencies that assume total responsibility for the administration and operation of services. Many public transit operators believe that they can ensure more efficient service delivery by providing the service themselves. Through direct operation they are able to ensure vehicle reliability and more efficient service delivery. Direct operation affords more control over service quality and makes it easier to integrate paratransit with fixed-route transit. The advantages of publicly operated paratransit usually include lower insurance rates, less expensive fuel costs due to bulk purchases, and internal control over quality and demand (10). Disadvantages generally center around the high costs of transit labor and benefits, and inflexible work rules. Research suggests that public sector transit wages and benefits may be higher than those of the private sector (11). Section 13(c) of the Federal Transit Act (49 U.S.C. 5333) requires that the position of existing transit workers not be diminished through projects initiated with federal DOT funds. Because local transit labor unions are concerned that contracting out paratransit services paid for with federal funds may diminish the position of transit workers, they often seek to keep paratransit service delivery in-house. The requirement is not an insurmountable

barrier, but it may make contracting for services more difficult (12).

Private Sector Contracts

Transit agencies enter into service contracts with private for-profit and nonprofit carriers, ranging from local taxi companies to national transportation companies, for the provision of paratransit services. The contracts are awarded to the proposer who best meets selection criteria through the competitive bid process. Contracts are awarded for a designated time period of up to 5 years, including renewal options. Mandatory levels of accident and liability insurance are specified. Vehicles may be privately owned, operated, and maintained, or provided by the transit agency. Contracts delineate performance standards, quality indicators, and general conditions. Most include financial penalties for unsatisfactory service and some include financial incentives for superior service delivery. Sometimes contracts include special “start-up” provisions to allow new contractors to make the transition to acceptable performance levels. Mandatory reporting and other compliance requirements, as well as monitoring strategies, are detailed.

Considered to be more economical than publicly run paratransit services, studies suggest an average savings of 30 percent cost savings with privately provided transit services (11). The lower unit service cost is usually attributed to the lower labor costs of the private transportation industry and cost benefits accrue from economies of scale. Experienced private carriers are often credited with having the capability to start up services quickly, as well as the resources to expand system capacity on relatively short notice. National transportation companies can draw additional vehicles from other localities, and private companies usually have the flexibility to buy or lease additional vehicles in less time than public operators.

Single Contracts

Public transit operators use dedicated service contracts to employ a single carrier (sometimes two) to provide paratransit service for the exclusive use of transit agency passengers. Dedicated contracts are commonly used because of relatively low per-trip costs and established track records for quality service. With traditional single-carrier contracts, the pressure to keep the costs low and the service quality high comes from the prospect of losing the contract the next time around.

Multiple Contracts

When paratransit demand outstrips supply, transit agencies use several strategies to increase paratransit capacity. Many

maximize the amount of paratransit service through expanding existing single-service contracts to multiple providers. The competition of multiple operators has been credited with helping to keep service quality high and costs down (12). Both brokerage arrangements and user-side subsidy programs involve contracts with multiple private operators.

Brokerage Systems

Brokerage systems use a centralized approach to service management that can be transit-operated or contracted out. The broker receives requests, matches the travel request with an appropriate carrier, and schedules the trip. These systems are usually set up using multiple providers in the area; transit agencies may also participate as a service provider. Brokerage systems are noted for efficiency and quality control because they help to eliminate duplication of services through the efficient use of equipment and staff (12).

User-Side Subsidy Programs

In user-side subsidy programs, eligible passengers buy script or trip vouchers at a reduced rate from the transit agency to pay for paratransit service. Passengers may call a particular participating provider of their choice, reserve a ride, and pay for the ride with the designated script. The participating carriers redeem the script for payment from the transit agency at some previously established value. Participating carriers are usually local taxi companies, but may include other private for-profit and nonprofit vendors. User-side subsidy programs are most commonly used to supplement other paratransit services with late hour and weekend services. Taxi drivers benefit from user-side subsidy programs because they have guaranteed riders, usually more than they could find on their own. User-side subsidy programs are particularly cost-effective for trips that are not easily grouped, e.g., individual work trips, dialysis and other medical trips, and trips in sparsely populated areas (13). User-side subsidy programs are popular with paratransit customers because this approach affords them some level of control over their own transportation. On the other hand, transit agencies report that the popularity of user-side subsidy programs often makes it difficult to control demand (13).

Combination Models

The debate between public service and private enterprise is longstanding (10). Though both models have their advantages and disadvantages, it appears that the joint operation of paratransit services offers the best benefits of both. In the most common combination models, transit agencies provide administrative, reservation, and scheduling functions, and some paratransit trips. Trips that cannot be accommodated by the transit agencies are contracted out to one or more private providers. Combination models are effective because they achieve

the benefits of direct operation and contracted service (10). Combined transit agency-operated/contracted paratransit service delivery may also serve to alleviate labor union concerns about Section 13(c).

Coordinated Paratransit Services

Coordination combines or pools community transportation resources to meet the community's transportation needs. This pooling or coordination of resources, which may include vehicles, finances, and administrative functions, serves to expand the community's transportation capacity. It also helps to eliminate duplication and fragmentation of services, improves productivity, and ultimately reduces costs through effective service delivery. Traditionally used by smaller and rural systems, coordination has not been used as frequently in the larger urban areas. The complexity of combining multiple funding sources, categorical eligibility criteria, and many social service agencies is perceived as a barrier to coordinated transportation systems.

EMERGENCE OF PUBLIC SECTOR PARATRANSIT SERVICES

Paratransit services provision emerged as a private sector endeavor. The earliest paratransit services were provided solely by private transportation companies. Paratransit services emerged as early as the late 1960s in response to the needs of human service agencies to provide transportation for their clients. Particularly in rural and small-urban communities, public transit services were either not yet available or not designed to meet the individualistic nature of human service transportation. Consequently, paratransit services were sponsored by human service agencies and usually provided through contracts with local private nonprofit transportation providers. But for the past 25 years, paratransit services have also been funded by public transit agencies.

In the early 1970s, federal legislation requiring "special efforts" in accessible transportation was initiated with amendments to the Federal Transit Act (formerly known as the Urban Mass Transportation Act of 1964 (as amended, 49 U.S.C. 1612). Methods to achieve special efforts included specialized demand-responsive paratransit services. In 1974, Congress approved the use of federal operating assistance for publicly operated paratransit services and established the Section 16(b)(2) program, which provides capital assistance to private nonprofit organizations for the provision of transportation services to seniors and individuals with disabilities. Enactment of this legislation increased the provision of paratransit services, as several public transit operators took over the administration and operation of paratransit programs from human service agencies, while others initiated their own programs. Paratransit services continued to gain popularity as the approach to accessible transportation in response to subsequent DOT regulatory requirements.

Pre-ADA Paratransit Service Delivery

Traditionally, smaller transit agencies have contracted out their paratransit services, but research suggests that the larger transit agencies tended to operate their services in-house. By 1985, following a series of federal regulatory requirements for accessible transportation, one-third (34 percent) of public transit agencies provided accessible transportation exclusively through paratransit services, 21 percent operated only accessible fixed-route buses, and 45 percent operated both paratransit and accessible fixed-route services. Small communities relied more heavily on paratransit services. A significant percentage (42 percent) of these pre-ADA paratransit programs were operated in-house. Only 18 percent contracted services out exclusively, and 40 percent jointly operated a portion of paratransit services and contracted out a portion to private transportation vendors (12).

Walther Study

By 1988, more than a decade after the initial DOT regulations, the majority of public transit agencies had implemented paratransit programs to meet the 1986 DOT Final Rule implementing Section 504 of the Rehabilitation Act of 1973 (29 U.S.C. 794). To determine the impact of these regulations, Walther surveyed 100 transit agencies to ascertain how they were providing accessible transportation services (14). Although his research revealed a wide range of service delivery methods, 91 of the 100 transit agencies surveyed provided some level of paratransit services. He found that direct operation was the majority choice for paratransit service delivery. The majority (60 percent) of the transit agencies that provided paratransit directly operated all or a portion of the services. The remaining transit agencies (40 percent) that provided paratransit systems used various methods for contracting out the service. It is interesting to note that in the Walther study, most respondents reported that paratransit service method decisions were influenced by transit agency concern about the potential of increasing paratransit demand and declining federal funding.

ADA Paratransit Service Delivery

Following the passage of ADA, a 1993 study of public, fixed-route operators' policies for accessible transportation found that direct operation of all or a portion of paratransit services was the majority choice of the transit agencies surveyed (15). The majority (73 percent) of the transit agencies that responded were providing paratransit services before the passage of the ADA. Of the 280 transit agencies that responded, 245 reported paratransit service methodologies. Of these, 39 percent directly operated all of their paratransit services and 27 percent combined direct operation with contracts. These findings supported earlier assumptions that privatization was not yet growing in response to ADA paratransit requirements (15). The remaining 34 percent of responding

agencies were divided among those reporting signed contracts after the passage of ADA (20 percent) and 14 percent "other."

Drachman Institute Study

In 1994, early experience with ADA paratransit services began to support concerns about paratransit costs. Even at this early juncture, transit agencies were beginning to experience a surge of paratransit ridership demand at a time that government funding for transit operating assistance was being reduced. In light of this development, it was reasonable to assume that public operators would turn to the private sector for assistance with the provision of ADA paratransit services. To test this hypothesis, research was undertaken to determine if public transit operators would increase their use of private operators to comply with the ADA paratransit provisions (8).

According to their 1992 ADA Paratransit Plans and selected 1993 and 1994 ADA Plan Updates, several transit agencies did not anticipate increasing the role of the private sector in meeting ADA paratransit obligations. Of 400 transit agencies surveyed, 17 percent indicated that they would not increase the use of private contractors to provide ADA paratransit services. Among the research findings:

- Smaller systems were more likely to continue to contract out paratransit services.
- Coordination was more prevalent in the smaller cities.
- Large urban systems planned to continue operating their own paratransit services.
- Several transit agencies were planning on terminating user-side subsidy programs.
- The majority of transit agencies that contracted out their paratransit services contracted with nonprofit paratransit providers.
- Larger agencies were contemplating greater use of combination models and increased use of multiple contracts.

The research concluded that most of the transit agencies surveyed anticipated increased paratransit demand and its concomitant costs, and were beginning to reassess paratransit service delivery methods. Several public operators were beginning to investigate alternative means of providing paratransit trips as a means to decrease the costs of service delivery.

CONCERN ABOUT COSTS

In conjunction with dwindling financial resources, transit agencies continued to experience rapid growth in paratransit demand. As they became increasingly concerned about their ability to meet the ADA paratransit requirements, Congress queried the FTA about potential solutions. In 1995, in response to congressional concern about the implementation of ADA paratransit requirements, the FTA requested that Project ACTION (Accessible Community Transportation in Our Nation) convene national meetings of public and private

transportation operators, federal government representatives, and national disability advocates to discuss the problem (6).

ADA paratransit services have become the fastest-growing segment of public transit ridership, and may well be the most expensive ADA compliance costs in transportation. ADA is civil rights legislation that presents the industry with federally mandated requirements without accompanying funds. According to APTA, ADA paratransit services may cost the transit industry as much as \$1 billion annually in operating funds (6). Because ADA compliance must be assumed within existing budgets, public operators were grappling with tough decisions about cutting fixed-route service and raising fares to meet the escalating demand.

While the smaller systems were generally more experienced in paratransit services delivery, several of the larger systems that did not provide pre-ADA paratransit services indicated that they had little or no experience with paratransit management and operation. Among the many recommendations made at the Project ACTION forums, several were made to improve paratransit operations. Among these was the suggestion that operators reassess their methods for providing paratransit services. It was also suggested that operators develop performance standards for paratransit service and then select the most appropriate service provider, whether public or private. Operators were urged to consider the role of the private sector and integrating paratransit service with fixed-route service modes.

DREDF Study

Financial pressures compounded by escalating paratransit demand have encouraged transit operators to identify ways to cut paratransit service costs. Contrary to previous research, contracting out paratransit service delivery seemed to be increasing.

Also in 1995, Project ACTION funded the Disability Rights Education Defense Fund (DREDF) to survey selected public transit agencies and disability groups to determine the level of ADA compliance in public transit agencies (16). The DREDF research revealed an increase in privately operated paratransit service. Among 52 public transit agencies, of which 86 percent had operated pre-ADA paratransit services, the majority contracted paratransit services delivery to the private sector. Thirty-one percent directly operated their own paratransit services, 19 percent chose combination models of service delivery, and 50 percent contracted out services exclusively. Of the privately operated services, nearly half (46 percent) contracted with local private providers, including one-third (34 percent) that used multiple carriers. One-fifth of the operators surveyed contracted with national operators such as DAVE Systems, ATE, and Mayflower.

According to the DREDF research, on the average it costs transit agencies \$11.60 to provide each one-way paratransit

trip. Transit agencies reported that paratransit service delivery accounted for approximately seven percent of their entire operating budgets. Among the transit agencies surveyed, the number of paratransit trips provided ranged from 5,500 to 1,200,000, with a median of 72,000 annually. The major operational concerns identified were poor on-time performance and inefficient scheduling. Similar to previous research initiatives, the DREDF study highlighted the widening gap between federal operating assistance and spiraling paratransit demand. It appeared that costs and demand were increasing private sector participation in paratransit services delivery.

Direct Operation

As some operators move to increased privatization, anecdotal evidence suggests that others may be reconsidering in-house paratransit delivery (17). As transit operators continue their search for cost-effective strategies, acceptance of the use of two-tier driver wage scales may be increasing. A standard practice in Canada, it appears that some U.S. public transit operators have reached agreements with their local transit unions to establish separate positions for paratransit drivers that allow lower wages for paratransit service delivery (18).

The unions have conceded to such arrangements because paratransit service delivery is a different type of mass transit: it uses smaller vehicles and it transports smaller groups of passengers. Most importantly, it keeps paratransit service delivery in-house. In most cases, paratransit drivers are furloughed, retired, or new part-time drivers, who are paid a lower wage than full-time fixed-route drivers. In most transit agencies, all new hires are part-time drivers who have the opportunity to move into full-time positions based on job slot availability and seniority. In some transit agencies that have implemented two-tier pay scales, similar arrangements are available. When paratransit drivers become eligible and slots are available, they can have the opportunity to move into fixed-route positions. Using lower-wage, unionized paratransit drivers allows public operators to compete with private sector paratransit carriers. If this practice is expanded, it has the potential to have a major impact on paratransit service delivery.

Significant progress has been made to improve the delivery of accessible transportation with the passage of the ADA. Increased numbers of people with disabilities are using accessible transportation, primarily ADA complementary paratransit services. Paratransit demand has escalated beyond projections; service delivery costs are far more expensive than anticipated; and federal funds are scarce. From all indications, transit operators are searching for more cost-efficient service delivery methods. Although some transit agencies may be reconsidering direct operation with lower paid unionized drivers, it appears that privatization of paratransit service delivery is increasing.

PARATRANSIT SERVICE DELIVERY METHODS

A variety of administrative and operational methods are being used for the day-to-day provision of ADA paratransit services. These approaches include services that are contracted out to the private sector exclusively, directly operated by the transit agencies, and various combinations of both. This chapter presents the paratransit service delivery methods used by the respondent transit agencies.

OVERVIEW OF RESPONDENT PARATRANSIT SERVICE DELIVERY METHODS

The public transit operators surveyed used a variety of approaches for paratransit services provision, but contractual arrangements with private operators was the predominant method. Almost one-half (46 percent) of the transit agencies that responded contract out all paratransit trips. More than one-fourth (29 percent) use a combination of direct operation and contract out a portion of their paratransit trips to the private sector. Fourteen percent of the transit agencies surveyed operate all paratransit services in-house. Eleven percent of the respondents no longer provide paratransit services. To avoid the federal requirement for ADA paratransit services, two agencies reported abolishing traditional fixed-route service and turning instead to demand-responsive or route deviation modes. Respondent paratransit service methods are shown in Table 3.

Direct Operation

Among the respondent transit agencies, direct operation was the least preferred method for providing ADA paratransit services. Only four (14 percent) of the respondents operate paratransit service in-house exclusively. Among these are three small urban agencies:

- Athens Transit, Athens, Georgia,
- City of Anderson Transportation, Anderson, Indiana, and
- Metropolitan Evansville Transit Agency, Evansville, Illinois.

Metropolitan Evansville Transit Agency provided pre-ADA paratransit services through contracts with a for-profit and a nonprofit provider, but brought ADA paratransit service delivery in-house to improve reliability and efficiency.

The Metropolitan Atlanta Regional Transit Authority (MARTA) in Atlanta, Georgia is the only large urban respondent that directly operates ADA paratransit service. MARTA initiated pre-ADA paratransit with a contract with a national private carrier in 1987. In March 1997, MARTA brought all paratransit service and management in-house to assert more control over quality and passenger usage.

Single Contracts

Among the private sector arrangements, service contracts for dedicated service delivery with one or two private providers was the most common. The majority (54 percent) of the respondents contract with a single private provider for dedicated paratransit services. Among the agencies surveyed, only three, all smaller systems, have contracts with nonprofit providers.

Multiple Contracts

Nearly half (46 percent) of the transit agencies surveyed contract with multiple private providers for paratransit service. Most did not initiate paratransit service with multiple contractors, but expanded the number of contracts to increase their capacity to meet growing paratransit demand. According to survey data, the use of multiple operators is growing among the larger systems.

TABLE 3
PARATRANSIT SERVICE DELIVERY METHODS BY TRANSIT AGENCY SIZE N = 28

Transit Agency Size (Number Responding)	Direct Operation	Combination	Single Contract	Multiple Contract	Changed/Does Not Operate	Coordination	User-Side Subsidy
Small (2)		1	1				
Small Urban (10)	3	2	3		2	4	1
Medium (6)		2	2	2		1	
Large (10)	1	3	1	4	1	1	1
Total (28)	4	8	7	6	3	6	2
Percent	14	29	25	21	11	21	7

- Broward County contracts with multiple private carriers because the current volume is too large for a single contractor. In addition, in their experience, the competition seems to improve service quality.

- Chicago Transit Authority (CTA) directly operated a portion of their paratransit trips and contracted out the remainder of trips to multiple private carriers from 1981 to 1985. To cut costs, in 1985, CTA abandoned in-house services and began contracting out all paratransit service to multiple providers. Using multiple providers allows CTA to purchase more service at a more economical rate than it can provide in-house.

- Pace Suburban Bus contracts out all Dial-A-Ride and ADA paratransit service to private providers because of the high cost and low efficiency of paratransit service.

- Pinellas Sun Coast Transit (PSTA) initiated paratransit service through a direct operation model, changed to a combination operation/contract model, and 4 years ago eliminated in-house service and contracted out all paratransit trips to multiple operators.

Brokerage

Two respondents that combine direct operation with contracted service use multiple contracts. In these agencies paratransit service delivery is managed through a broker.

- SamTrans in San Mateo County, California, started its paratransit service contracts with a private for-profit and a nonprofit operator. The agency changed to a combination/brokerage model because of the lower costs and satisfaction with their contractors. The agency continues to operate their own vehicles, but added other contractors to meet the growing demand.

- The Washington Metropolitan Area Transit Authority (WMATA) established paratransit service in response to the ADA requirements and selected a combination/brokerage model because of costs and the ease of implementation in an interjurisdictional regional system. WMATA contracts with a national transportation company to serve as broker and provides paratransit trips.

User-Side Subsidy Programs

Only two respondents reported the use of user-side subsidy programs.

- CTA's user-side subsidy program supplements evening and weekend service.

- Eagle Transit uses their Riders' Choice program to supplement paratransit service during its normal operating hours.

Combination Methods

More than one-fourth (29 percent) of the transit agencies responding both operate and contract out paratransit service.

The use of combined service delivery models appears to increase with transit agency size. It is currently used by one small; two small-urban; two mid-sized; and three large urban transit agencies.

- Bettendorf Transit, Bettendorf, Iowa,
- Eagle Transit, Kalispell, Montana,
- Metropolitan Transit Authority, Nashville, Tennessee,
- Pinellas Suncoast Transit Authority, Clearwater, Florida,
- San Mateo Transit, San Mateo County, California,
- Mass Transit Administration, Baltimore, Maryland,
- VIA Metro Transit, San Antonio, Texas, and
- Washington Metropolitan Transit Authority, Washington, D.C.

The smaller systems reported that they combined direct operation with contracts because of costs and a lack of system capacity to operate the entire service, including time and staff resources for schedule coordination, vehicle maintenance, and trip provision.

The larger systems identified costs, control, and the need for a balanced approach to service delivery to assuage labor union concerns as their major selection factors. Among the combination models, Eagle Transit, MTA in Baltimore, and VIA conduct their own reservations and scheduling functions.

Do Not Operate Paratransit Programs

To avoid the federal requirement for ADA paratransit services, two respondents abolished traditional fixed-route services.

- Kosciusko Area Bus Service, Warsaw, Indiana changed to a demand-responsive operation.

- Montgomery Area Transit, Montgomery, Alabama established a 3/4-mile route deviation. The fixed-route service follows a predetermined route and schedule, but riders who live in the ADA service area (corridors of 3/4-mile on either side of the fixed-route service) may request deviation for pick-up or drop-off. The rider-initiated deviations determine the exact route, after which the vehicle returns to its scheduled route.

- Connecticut Transit, Hartford, Connecticut reported that it does not provide paratransit service because the service is provided in each local transit district.

Coordination

Survey data revealed limited use of coordinated paratransit services. Only 21 percent of the respondents reported coordination arrangements.

- Beaver County Transit in Pennsylvania transports health and human service agency clients and senior citizens.

- Broward County transports senior citizens under Florida's transportation disadvantaged program.

- Eagle Transit in Montana provides transportation for the school district's special education students and clients of

designated human service and developmental disabilities programs.

- Pima Transit, Tucson, purchases ADA paratransit service from the City of Tucson.
- Riverside Transit in California transports health and human service agency clients in the rural areas with limited fixed-route service.

DISTRIBUTION OF SERVICE DELIVERY METHODS BY TRANSIT AGENCY SIZE

Although the survey results did not establish a distinct relationship between paratransit service delivery models and size, several operating arrangements are more prevalent in a specific-sized urbanized area than others.

Small-urban operators demonstrated the greatest use of direct operation, contracts with nonprofit providers, and coordination. Mid-sized operators reported increased use of multiple providers, but limited use of coordination and contracts with nonprofit providers. Only one respondent coordinates paratransit service with other agencies, and one respondent contracts with a nonprofit paratransit provider. None selected direct operation as their paratransit service delivery method. The majority of the larger agencies have contracts with multiple private carriers for paratransit service delivery, none of which are nonprofit operators. Only one directly operates all paratransit services in-house; and only one coordinates paratransit service delivery.

RECURRING THEMES IN PARATRANSIT SERVICE DELIVERY

Analysis of survey data revealed several recurring themes in ADA paratransit service delivery. Given the small subset of transit agencies surveyed, it is premature to consider these as trends. However, these findings may be viewed as a snapshot of ADA paratransit service delivery in the industry.

Transit agencies continue to evolve their methods for paratransit delivery—As transit operators search for cost-cutting service delivery strategies, several have tried different methods. Approximately one-fourth (26 percent) of the respondent transit agencies have changed their paratransit services delivery method one or more times.

- Montgomery Area Transit (Alabama) changed service delivery from a contractual arrangement with a single provider to a demand-responsive 3/4-mile corridor deviation service in 1992 in order to comply with the ADA paratransit provisions.
- MARTA (Atlanta) changed its paratransit service delivery method three times. The agency started the service as a direct operation, changed to a contract with a national private provider, and, in March 1997, assumed direct operation of the paratransit service again.
- PSTA (Florida) started out by directly operating their own paratransit service and changed to a combination model. PSTA now operates a portion of the trips and contracts with multiple providers for the remainder of the service.

- Kosciusko Area Bus Service (Indiana) avoided the requirement for paratransit by changing to a demand-responsive system in 1995.

- Metropolitan Evansville Transit (Illinois) changed from a single private provider in 1992 to a direct operation.

- CTA (Chicago) changed from a combination/single contract to contracting exclusively with multiple providers, and supplementing with a user-side subsidy program using taxicabs.

- DART (Texas) changed from a taxi program to a van-only contract, and recently brought reservations and scheduling in-house. The agency plans to assume responsibility for dispatching in the near future.

The use of private sector paratransit providers has increased—Financial constraints have prompted an increasing role for private sector paratransit carriers. According to the agencies that responded, the private sector can provide the service at a lower cost and has the equipment and resource capacity to meet the growing demand for service. Consequently, it appears that more operators have turned to the private sector for all or a portion of paratransit service delivery.

Contracts with nonprofit carriers are limited—Few of the transit agencies surveyed contract out paratransit services to nonprofit providers. According to survey responses, the operators that currently contract with nonprofits for paratransit services have maintained these contracts over the years. These nonprofit providers continue to successfully rebid and renew their contracts. While most respondents have been satisfied with service quality, in several instances the transit agencies reported that the nonprofit operators lack the capacity to meet the full demands of their ADA paratransit services.

New ADA paratransit operators contract with the private sector—Paratransit start-up costs are usually more expensive and time-consuming for public transit operators (18). Consequently, all respondent agencies that established paratransit programs in response to the ADA requirements privatize all or a portion of their paratransit services. Three of the agencies have contracts with a single private provider. One agency uses a brokerage to provide a portion of the trips and contracts out the remainder to multiple contractors. The other transit agency combines direct operation and a contract with a nonprofit provider.

Transit agencies are conducting their own reservations and scheduling—Among the agencies surveyed, increasingly more transit operators are contracting out paratransit trips, but conducting their own reservations and scheduling functions. DART contracts out all paratransit trips to multiple providers, which has proven to be less expensive than direct operation. However, as a demand-management strategy, DART recently brought reservations and scheduling in-house. The takeover of this portion of the service is expected to reduce administrative and labor costs, as well as improve service design and control. Over the next 12 months, DART will install mobile data terminals in their vehicles and eventually handle their own vehicle dispatching. Riverside Transit Agency contracts out all paratransit trips to multiple providers because it is cost-efficient and seems to improve service quality. RTA, too, recently brought reservations and scheduling in-house for quality control. MTA

(Baltimore) and VIA (San Antonio) also conduct their own reservations and scheduling.

Transit operators may be reconsidering direct operation—As operators continue to face the challenges of meeting paratransit demand with diminishing funds, several may be reconsidering direct operation. Most willingly admit that they would prefer to provide paratransit services in-house, but cannot afford to do so because of the traditionally high costs of unionized labor. In order to provide the services in-house, some transit agencies have negotiated union agreements for lower paratransit driver wages. Among the survey respondents, MARTA is the only large urban operator that has currently implemented this approach. According to survey data, it is being considered by other transit agencies.

FACTORS INFLUENCING SELECTION OF SERVICE DELIVERY METHOD

The transit agencies surveyed identified several factors that determine the selection of their paratransit services method. However, the factors that ranked highest in influencing their decisions are costs, responsiveness, experience with paratransit service delivery, and control.

Costs

The majority (64 percent) unquestionably identified cost as the driving force for selection of their paratransit service delivery method. In making the choice between in-house and contracted services, the lower cost per passenger trip was usually the most significant stimulus.

Responsiveness

Cost was not the only factor in deciding whether to contract or provide paratransit services internally. More than one-fourth (28 percent) of the respondents identified equipment

availability and capability to respond to the rapidly increasing paratransit demand as very important.

Experience with Paratransit Delivery

Experience in paratransit service delivery was a frequently cited decision factor for contracting out the service. Agencies that did not provide paratransit prior to the ADA seemed particularly concerned about selecting experienced paratransit providers that could start up quickly.

Control

Most large urban agencies identified control as a major decision factor. Although they acknowledged the economic benefits of privatization, they were equally concerned about maintaining control over the quality of the service and demand management.

Other Determining Factors

In some communities, the decision to operate in-house was driven by community influence and support. Community support seemed particularly important in some of the small-urban agencies, where it was generally perceived that the public operator was more committed and could provide a better service cheaper. Other decision factors identified are:

- improved quality,
- flexibility,
- labor union concerns,
- convenience,
- improved customer service,
- better technology,
- insurance.
- competition, and
- continuity.

CHAPTER FOUR

DESCRIPTION OF PARATRANSIT PROGRAMS

The following discussion presents survey findings relative to level of paratransit services provided, passengers transported, vehicle fleet size, costs, and performance.

LEVEL OF SERVICE

Transit agencies may provide either curb-to-curb, door-to-door, or door-through-door paratransit services to meet the needs of their passengers. Curb-to-curb paratransit, the minimum level of service required by the ADA, is service from the curb in front of the point of trip origin to the point of destination. It requires the driver to assist the passenger into and out of the vehicle if needed, and to fold and store the wheelchair in the vehicle.

Door-to-door paratransit is service from the door of the building at the point of origin to the destination doorway. If needed, driver's may assist passengers from the door of the building to the door of the vehicle. Drivers may assist with pushing a wheelchair, extending an arm to steady passengers, and/or carrying passengers.

Door-through-door paratransit requires the driver to assist the passenger across the threshold of both the origin and destination building or residence. Some contracts require that drivers enter the passenger's residence, other strictly forbid it, specifying that drivers shall not extend assistance to the point that they lose sight of the vehicle. Usually drivers assist passengers up and down steps and in and out of buildings, as well as into and out of the vehicles. The level of passenger assistance depends on the need and is at the request of the passenger.

Among the transit agencies surveyed, the majority (52 percent) provide curb-to-curb paratransit only. More than a fourth (28 percent) provide door-to-door exclusively, while a smaller percentage (16 percent) provide both curb-to-curb and door-to-door service. A small number of agencies that responded (4 percent) provide all three levels of paratransit services, dependent upon passenger need.

PASSENGERS TRANSPORTED

While most transit agencies provide ADA paratransit service to ADA-eligible passengers exclusively, some are also serving seniors and the general riding public. Though more prevalent in large urban areas, the majority (56 percent) of all respondents provide paratransit services to ADA-eligible passengers only. Sixteen percent provide paratransit service to both ADA-eligible passengers and senior citizens. Particularly in the smaller rural communities, ADA paratransit service is included in general community paratransit services. Therefore,

ADA-eligible passengers are provided paratransit service in the same vehicles as the general riding public.

VEHICLE FLEET SIZE AND MIX

All respondent transit agencies transport at least a portion of their paratransit passengers in accessible vans. Most of the agencies supplement these vans with a broad mix of vehicles, including small buses, mini-vans, and sedans:

- 44 percent use vans only,
- 20 percent use vans and mini-buses,
- 20 percent use a mix of vans, mini-buses, and sedans and/or taxis, and
- 16 percent use vans and sedans and/or taxis.

The significant percentage (36 percent) of transit agencies that reported the use of sedans and/or taxis to supplement paratransit service delivery suggest that a sizable portion of paratransit users are ambulatory or can transfer into automobiles.

Paratransit vehicle fleet size varies according to the size of the transit agency and the amount of service provided. In small-urban agencies, paratransit fleets range from 4 vehicles to 24 vehicles, with a median paratransit fleet of 15 vehicles. In mid-sized agencies, paratransit fleet size ranged from 4 to 75 vehicles, with a median paratransit fleet of 34 vehicles. In large urban agencies, paratransit fleet size ranged from 34 to 384 vehicles, with a median fleet size of 179 vehicles.

In several of the communities surveyed, these vehicles are used to transport other passengers. In addition to ADA-eligible passengers, approximately one-quarter (29 percent) of the respondents use their paratransit vehicles to transport senior citizens, transportation disadvantaged passengers, Medicaid recipients, and other passengers. In rural communities, the paratransit vehicles are used to provide the county's transit services.

PARATRANSIT SERVICE COSTS

The cost of paratransit service seems to vary according to transit agency size, demand, and type of service delivery. In the communities surveyed, annual paratransit operating budgets ranged from an average of \$55,602 for small transit agencies to an average of \$10 million for the larger transit agencies. The average cost to provide a one-way passenger trip ranged from \$10.90 for small-urban systems, to \$14.33 for mid-sized systems, and \$26.03 for large agencies. The average one-way paratransit fare ranged from \$1.10 to \$2.00, although in some larger agencies fares are as high as \$3.00 each way.

PARATRANSIT SERVICE PERFORMANCE

Respondents reported the following performance data:

- The transit agencies surveyed reported a total of 6,834,880 one-way paratransit trips for fiscal year 1996. On the average, annual one-way paratransit trips totaled 4,953 in small agencies, 54,495 in small-urban agencies, 130,747 in mid-sized agencies, and 715,315 in large urban systems.
- Among the transit agencies surveyed, trip denial rates were reported in a range from zero to five percent. On the average, respondents are denying approximately 2.5 percent of all trip requests because of capacity constraints.
- Among the respondents, productivity is relatively low. On the average, transit agencies are transporting less than two passengers per hour. Fifty-six percent of respondents attributed this low productivity to inefficient passenger loading and inefficient use of vehicles. Several noted that the productivity could be improved with more efficient scheduling and vehicle loading.
- Only two large agencies reported on-time performance as low as 85 and 89 percent. Generally, the on-time performance was reported in a range from 90 to 95 percent.

Measures of Efficiency and Effectiveness

For the purposes of this study, efficiency is defined as a measure of cost-effectiveness and productivity. Effectiveness is defined as a measure of service quality and includes such dimensions as total trip length, reliability, safety, comfort, and convenience. Respondents were asked to rate their service delivery method for efficiency and effectiveness on an ascendant scale of 1 to 5. Although most respondents agreed that paratransit is inherently inefficient, for the most part, they perceived their particular paratransit service method as efficient. One-half of the transit agencies reporting rated their paratransit method efficiency as 4. The average efficiency rating for all respondents is 3.5. Nearly three-fourths (70 percent) of the respondents rated the effectiveness of their paratransit methodology as 4. The average effectiveness rating was 3.7. Transit

agency perceptions of efficiency and effectiveness of the various service delivery methods varied according to transit agency size.

- Smaller agencies ranked direct operation, combination, and single contracts from the most to the least effective.
- Mid-sized agencies ranked multiple contracts, single contracts, and combination as the most to the least efficient and effective.
- Large agencies ranked multiple contracts, combination, and single contracts as the most to the least efficient and effective.
- Mid-sized systems contractual arrangements for dedicated service ranked as the second most efficient and effective model. Respondent efficiency and effectiveness ratings are presented in Tables 4 and 5.

TABLE 4
RESPONDENT PARATRANSIT SERVICE EFFICIENCY RATINGS

Transit Agency Size (Number Responding)	Efficiency Ratings by Frequency of Responses				
	1	2	3	4	5
Small (2)				1	1
Small-Urban (8)		1	1	6	
Mid-sized (6)		2		4	
Large (8)		3	4	1	
Total (24)		6	5	12	1

TABLE 5
RESPONDENT PARATRANSIT SERVICE EFFECTIVENESS RATINGS

Transit Agency Size (Number Responding)	Effectiveness Ratings by Frequency of Responses				
	1	2	3	4	5
Small (2)		1			1
Small-Urban (8)		1	1	6	
Mid-sized (6)			1	5	
Large (8)			2	6	1
Total (24)		2	4	17	2

CONTRACT ELEMENTS AND PERFORMANCE STANDARDS

Transit agency contracts for paratransit services are subject to FTA third-party contracting guidelines and procurement oversight, as well as state procurement regulations (19). The federal guidance delineates comprehensive guidelines and mandatory procedures for the solicitation, award, and administration of third-party contracts. Included are requirements for awards to the lowest responsible contract and full and open competition. Transit agencies are required to define a clear, accurate description of the contract technical requirements, term of contract, scope of services, compensation, liquidated damages and incentive provisions (if applicable), indemnity, insurance, performance standards, and general contract conditions. The following discussion describes several key dimensions of paratransit contracts as reported by the transit agencies surveyed.

SCOPE OF CONTRACT SERVICES

Contracts differ according to the scope of program responsibilities. In the transit agencies surveyed, the majority (67 percent) contract for the administration and operation of their paratransit programs, which include reservations, scheduling, dispatching, and operating the vehicles. Fourteen percent of the systems contract for reservation, scheduling, dispatching and operating the vehicles, and making eligibility determinations. The data revealed that a significant number of transit agencies are performing their own reservation and scheduling functions to control passenger usage; others reported intentions to bring reservation and scheduling in-house. Approximately one-fifth (19 percent) have contracts for dispatching and operating the vehicles only.

METHODS OF COMPENSATION

Survey data indicated that nearly half (48 percent) of private sector contractors are paid on an hourly rate basis with fixed start and end times. More than one-third (38 percent) are paid according to an established flat rate per trip, some with different categories of payment, such as vehicle type and trip length. For example, some systems have established rates for passengers who can be transported in sedans and taxis and other rates for passengers requiring accessible vehicles. Other systems reported a flat trip rate payment system based on service area zones. Fourteen percent of the respondents compensate paratransit trips on an hourly and flat trip basis according to trip type.

Establishing Costs

In contract negotiations, reaching an agreement with private carriers on the value of paratransit service is often a complex

endeavor for public transit agencies (20). Several factors, which vary from transit agency to agency, must be considered when determining the cost of a reasonable passenger trip rate. Sometimes the contract trip rate does not reflect the entire costs of service provision. Frequently the contracted passenger trip rate is lower because it does not include all of the administrative costs, such as reservation and scheduling (21). Almost one-half (48 percent) of the respondents indicated that the predominant costs of paratransit service delivery are the operating expenses of labor, fuel, and mileage. Their responses suggest that these are the primary factors that operators consider when determining passenger trip rates. The other factors cited related to overhead and general administration expenses.

CONTRACTOR CONTINUITY

According to the survey results, half (53 percent) of the transit agencies that privatize paratransit services have maintained the same contractor over a period of years, some date back to pre-ADA paratransit services. These incumbent contractors have successfully retained their contracts through bid competitions and renewal options. However, in instances when the incumbents have not been retained, it is important to ensure a smooth transition between contractors. To maintain service quality and guard against service interruptions, several of the respondents use a variety of strategies to maintain service continuity. Some contracts (20 percent) include provisions that require the new contractors to hire the existing drivers who are familiar with the service area, route, and passengers. Others designate “start-up” periods during which performance standards are relaxed to allow new contractors to become familiar with service delivery. Other contractor transitional strategies cited are: 1) on-site assistance and support; 2) extensive contractor training and meetings; and 3) extended staff support during the transitional period.

To assist passengers during the transitional period between contractors, some of the transit agencies responding have disseminated new contractor information through the mail, posted information about the new company in paratransit vehicles, and set up telephone hot-lines to answer customer questions.

PERFORMANCE INCENTIVES AND PENALTIES

While the level of specificity varies from agency to agency, all contracts reviewed for this study clearly articulate paratransit service performance standards. So that there is no uncertainty about what constitutes satisfactory service, in some instances the contract-specified performance standards are also delineated in driver manuals and handbooks.

TABLE 6
SELECTED CONTRACT PENALTIES FOR FAILURE TO MEET PERFORMANCE STANDARDS

21–30 minutes late	10% of Trip Cost
31–45 minutes late	20% of Trip Cost
46–60 minutes late	30% of Trip Cost
61–90 minutes late	Full Trip Cost
91–120 minutes late	Full Trip Cost plus \$50.00
Over 2 hours late	Full Trip Cost plus \$75.00

Vehicle hours can be reduced by too many unacceptable occurrences such as unclean vehicles, vehicles without heat or air conditioning, slow response to complaints, failure to report accidents

Liquidated Damages for Late and Missed Trips

Disincentives for Substandard on-time performance, service failure, missed trip, and other vehicle issues

Penalties for maintenance, driver appearance, customer service, and administration. Failure to meet standards as follows:

Maintenance	\$150 per vehicle per day
Driver Appearance	\$50.00 per infraction
Customer Service	\$50.00 per valid complaint after 3 have been received
Administration	\$50.00 per occurrence of late or inaccurate paperwork

To ensure contractor adherence to performance standards, most (67 percent) respondent contracts include penalty clauses stipulating that failure to comply will result in the assessment of liquidated damages. Liquidated damage provisions are common in large transit agency contracts; all except one include penalty provisions. Approximately one-quarter of the respondent's contracts do not include provisions for penalties, while the remainder are developing penalty clauses for subsequent contracts. Generally, penalties are assessed for late, missed, and excessively lengthy trips. Liquidated damages are also assessed for failure to comply with other performance standards, such as failure to submit required reports, adhere to vehicle maintenance and cleanliness requirements, and unacceptable driver appearance and conduct. Examples of contract penalty provisions are listed in Table 6.

Some paratransit contracts also reward quality performance by providing incentives for exemplary performance. Several of the large transit agencies surveyed provide financial incentives for improvements in reliability, efficiency, and reducing customer complaints.

- Broward County rewards complaint-free service delivery. Contractors who have provided up to 4,000 trips per month without valid customer complaints, receive a \$500.00 bonus. For contractors providing over 4,000 trips, the complaint-free bonus is \$1,000.00 (22).
- Chicago's CTA provides contractor bonuses when more than 90 percent of trips meet the on-time-performance standards.
- Dallas Area Rapid Transit provides incentives for on-time performance, safety, and vehicle maintenance.

ENSURING QUALITY SERVICE

Data suggest that transit agencies are using more systematic and sophisticated performance and quality monitoring than ever before. The transit agencies surveyed employ a variety of monitoring approaches. Most systems regularly encourage user participation in monitoring the actions of drivers, as well as the overall quality of the service. Almost all have mandatory driver training requirements.

PERFORMANCE MONITORING

Monitoring is the process by which agencies oversee and check the contractors' performance to be sure that it meets the contract's performance standards. Monitoring is the chief means of guarding against contracting problems once the contract is signed. Without monitoring. . . , there is no way of knowing whether the contractors' work is faithful to the contract terms or whether the customers are satisfied (23).

The transit agencies surveyed employ a variety of strategies to monitor contractor performance and service quality. The level of monitoring appears to increase with transit agency size. All contracts require monthly performance reports and quarterly DOT Section 15 reports; several also include weekly reporting requirements. All agencies require financial audits and periodic review of vehicle maintenance records. The larger agencies reported making periodic unannounced field visits and riding along with drivers to observe performance and service quality. In addition, some systems have staff "go undercover" to observe performance and quality. In all respondent agencies, service quality is also monitored from the customer perspective. Most conduct random telephone calls to passengers and disseminate customer comment cards and periodic survey questionnaires. Table 7 shows contractor monitoring strategies by transit agency size.

DRIVER TRAINING

Among the transit agencies surveyed, all contracts except one include mandatory driver training requirements. Training provisions vary from a simple statement of minimum requirements to various levels of specificity regarding curriculum, length of training period, resources, and assurances. Most paratransit contracts call for initial driver training and a significant percentage (40 percent) of the large urban systems require annual refresher training.

One-fifth of the agencies require refresher training in response to customer complaints and incidents. Several systems require passenger assistance techniques and disability sensitivity training. One agency reported that disability sensitivity training is provided by individuals with disabilities.

CUSTOMER COMPLAINT PROCEDURES

Customer complaint management is critical to successful program implementation. Establishing a formalized process for customer complaints improves quality because it matches customer expectations with the realities of service delivery. Customer feedback can be used to adjust and modify service to the maximum extent feasible and improve and increase customer satisfaction (13).

The transit agencies surveyed reported a range of 5 to 1,362 monthly complaints. Almost all transit agencies responding encourage their paratransit passengers to call or write to report driver and service complaints, but the majority (58 percent) do not have formal complaint procedures. Respondents that do not have formal complaint procedures urge passengers to call in with complaints about driver courtesy, on-time performance, and passenger safety. With or without formal procedures,

TABLE 7
METHODS TO ENSURE CONTRACTOR COMPLIANCE WITH CONTRACT TERMS

Method	Number of Small/Small-Urban Transit Agencies Responding (N=9)	Number of Medium-Size Transit Agencies Responding (N=6)	Number of Large Transit Agencies Responding (N=8)
Audits	2	5	8
Customer Surveys	3	4	5
DOT Section 15 Data	2	4	6
Monthly Management Performance Reports	8	5	8
Random Phone Calls	2	4	4
Unannounced Visits	—	4	8
Undercover Rides	—	—	2
Vehicle/Maintenance Records	—	4	5

the majority (67 percent) of the agencies responding monitor driver courtesy by customer complaint. Several transit agency policies stipulate a written response within a designated period, ranging from 3 to 10 days. Of those systems (42 percent) that have established formal complaint procedures, large

systems are twice as likely to have complaint procedures than the smaller systems. According to the survey data, transit agencies that use multiple operators are more likely to have formal procedures for registering and responding to customer complaints.

SELECTED CASE STUDIES

The following case studies of selected transit agencies describe methodologies for providing ADA paratransit service.

EAGLE TRANSIT KALISPELL, MONTANA

COORDINATION

Eagle Transit is a Section 5311 rural transit system serving Flathead County, Montana (Population 65,000 +) operating as a program of the County Area Agency On Aging. Eagle began in 1984 as a specialized system providing transportation for senior citizens to nutrition sites, individuals with developmental disabilities to sheltered workshops, and contracting with a private provider for Dial-A-Ride services with user-side subsidy coupons. A general public, accessible, fixed route with deviation was developed in 1987 for the county seat, Kalispell. Dial-A-Ride bus service was added in two smaller towns as accessible buses were acquired. Intercity services are provided weekly.

ADA Paratransit Service Delivery

Eagle Transit provides ADA paratransit delivery through direct operation supplemented with a taxi-based user-side subsidy program. The schedules for the fixed-point deviation service are based on the habits of the riders and are augmented with both the Dial-A-Ride bus and a taxi program. The Dial-A-Ride bus and taxi programs require 24-hour advance reservations. Eagle administers the program, assigning rider requests according to the most appropriate and economical carrier. When possible, riders are grouped for bus trips or single trips are provided via taxi when it is more economical to do so. Paratransit services are coordinated with other local health and human service agencies. Eagle also transports school district special education students.

ADA paratransit service is provided curb to curb and door to door, as appropriate to ADA-eligible passengers, senior citizens, HHS agency clients, and the general public.

All trip scheduling and dispatching for paratransit service is performed by Eagle Transit. Eight accessible buses, four accessible taxi vans, and three taxi cars are used to provide paratransit services and general public transportation.

Costs

Eagle Transit's annual operating budget is \$205,000; \$193,660 for direct operation services and \$11,815 for contracts. Eagle provides a one-way passenger trip at a cost of \$5.27. The contractor is paid the actual meter cost per trip, which averages \$4.45, not including general administrative costs. The full allocated cost per paratransit trip is \$5.20. The one-way passenger bus fare in town is \$1.00; in the county it is \$3.00. Taxi one-way fare in town is \$1.75. Eagle provides discounts for elderly riders and passengers with disabilities.

Performance Data

Annual one-way trips total 36,719 provided by the transit system and 2,675 by the private provider. Eagle does not differentiate ADA paratransit in ride count. Annual rides for senior citizens total 22,536; rides for passengers with disabilities total 14,003; and passengers riding under the age of 60 total 2,837. Annual bus mileage is 86,562. Annual vehicle hours total 6,335 resulting in a productivity quotient of 5.8 (buses only). Eagle's monthly denial rate is less than one percent. The transit agency receives about 10 customer complaints per month.

Ensuring Quality Service

To ensure contractor compliance, Eagle maintains daily contact through dispatching and conducts random calls to service users. These strategies supplement periodic customer surveys and monthly management performance reports. Eagle's paratransit service contracts do not include incentives or penalties, as the private provider understands that rides will not be dispatched to him if riders or staff consider his performance unsatisfactory. Rider complaints and customer surveys are used to monitor on-time performance. Passenger safety and driver courtesy are monitored through personal contact with passengers and surveys. Drivers must participate in the Passenger Assistance Training (PAT), sensitivity, defensive driving and emergency training provided by the transit agency. Eagle has established formal written procedures for handling paratransit customer complaints.

Efficiency and Effectiveness

Eagle rates the overall cost-efficiency of the system and its paratransit program's overall efficiency at 4 in an ascending

range of 1 to 5. Average passenger ride time and on-time performance are the areas where improvement is needed.

MASS TRANSIT ADMINISTRATION BALTIMORE, MARYLAND

COMBINATION

The Mass Transit Administration (MTA) of the Maryland Department of Transportation (MDOT) is a major component of the state's multimodal transportation network. The MTA is unique, as it is one of only five transit agencies in the nation to operate four modes of transportation: light rail, heavy rail, commuter rail, and bus and paratransit services. MTA currently serves an urban and suburban population of over two million people across a tri-state area encompassing Maryland, West Virginia, and Washington, D.C.

Paratransit Service Delivery

In May 1978, MTA acquired its paratransit program, "Mobility" from Lutheran Social Services in Baltimore City. Mobility started out and continues to provide curb-to-curb paratransit service to eligible passengers with disabilities only, primarily through accessible vans, supplemented with sedans. Initially MTA directly operated the entire service, but in 1983 the high cost of service and demand necessitated contracting out a portion of the service. The service was costing MTA about \$20.00 per trip because Mobility continues to have the majority share of the transit system's high-seniority drivers. As part of the local union agreement, Mobility was included in the driver "picks" for routes three times a year. It was and continues to be the driver-preferred assignment because it is perceived to be easier and safer than fixed-route bus service.

MTA supplemented its in-house paratransit service with a traditional service contract with a local cab company to provide dedicated paratransit service to eligible passengers with disabilities. The contract stipulated that MTA would reimburse the taxi company for the actual meter cost of the trip. Due to suspected abuse and fraud, MTA canceled and rebid the contract in 1989. Another local taxi company won the bid that year and maintained the contract until 1997.

ADA Paratransit Service Delivery

Following the implementation of ADA paratransit service, the improved service, expanded service area, and escalating demand caused the transit agency to reassess paratransit service delivery. Direct operation was becoming cost-prohibitive because of the high driver salaries. MTA decided to contract out the entire service with the next bid competition. The high-seniority drivers complained to the local union, which referred the proposition of contracting out the entire

service to arbitration. In 1994, the arbitrators found that MTA had to continue to provide at least 25 percent of the paratransit service. MTA bid the contract but no one responded. The local taxi company retained the contract.

Under the 1996 contract, the company was paid a flat rate per trip of \$15.96 for providing an estimated 1,800 to 2,200 trips per week (about 65 percent of the paratransit service) using their own vehicles for MTA-dedicated service. Using a fleet of 20 accessible vans, MTA provided 35 percent of the service, including the majority of service to nonambulatory passengers who could not transfer. The contract required a productivity rate of 2.2 passengers per hour, and 95 percent on-time performance. Liquidated damages were assessed for late service and missed trips. If on-time performance was less than 95 percent, penalties were assessed when passenger pickups were 11 minutes late or more. At 95 percent on-time performance, liquidated damages started at 20 minutes or more late. All drivers were required to attend a 4-hour sensitivity training session conducted by MTA and individuals with disabilities. MTA conducted its own reservations and scheduling. In 1996, MTA bid the paratransit contract nationally.

Costs and Performance Data

A national firm was awarded the 3-year, \$13.9 million contract. Under the new arrangements, the contractor is paid a flat rate of \$10.00 per trip for providing about 1,300 trips a week with a fleet of 115 vehicles. MTA's annual paratransit operating budget is estimated at \$5 million. The agency still provides 25 percent of the service, primarily to nonambulatory passengers at a cost of about \$36.00 per passenger trip. The passenger fare is \$1.55. MTA also receives telephone reservations, conducts ADA paratransit eligibility determinations, and provides travel training. Productivity averages 1.7 passengers per trip, while the monthly denial rate is 2 percent.

Ensuring Quality Service

Methods used to ensure contractor compliance with contract terms include: audits of contractor, unannounced on-site visits to observe operations, periodic vehicle inspections, customer surveys and monthly management performance reports, and staff "undercover riders." Liquidated damages serve as the penalty for late service and missed trips. On-time performance, passenger safety, and driver courtesy and performance are also monitored by customer calls and letters. MTA does not currently have written procedures for responding to paratransit customer complaints. All drivers must undergo sensitivity training, which includes training by passengers with disabilities.

Efficiency and Effectiveness

On the scale of 1 to 5, the transit agency rates its efficiency at 2 because of inefficient passenger loading and at 4 for quality and effectiveness.

**METROPOLITAN ATLANTA RAPID
TRANSIT AUTHORITY
ATLANTA, GEORGIA**

DIRECT OPERATION

The Metropolitan Atlanta Rapid Transit Authority (MARTA) is a large, urban transit agency providing bus and rapid service for the metropolitan area of Atlanta, Georgia. Over two decades ago, MARTA began the direct operation of paratransit van service for the elderly and senior passengers with disabilities. In 1987, when high labor costs made direct operation of the service cost prohibitive, MARTA privatized the service in a single contract with a private national carrier, DAVE Transportation Services, Inc. DAVE retained the paratransit operation until March 1997.

ADA Paratransit Service Delivery

MARTA's ADA Paratransit Service is provided curb-to-curb to ADA-eligible passengers in a designated service area that is 3/4-mile either side of each fixed bus route. Service is operated using a fleet of seventy-seven, 22-ft, lift-equipped vans. MARTA's annual paratransit operating budget during the last full year of contracted services (July 1995 - June 1996) was \$2,887,887.50. The annual one-way passenger fare of \$3.00 per person is collected and retained by the contractor. Annual vehicle miles were estimated at 1,947,593 miles, while the annual vehicle hours totaled 108,108. These figures resulted in a productivity ratio of .84 passengers per revenue hour. MARTA was experiencing a monthly trip denial rate of less than 2 percent and monthly contractor on-time performance averaged 94 percent. Monthly accidents per mile averaged 2.09 per 100,000 miles. Monthly customer complaints were between eight and ten valid complaints per month.

MARTA was able to ensure contractor compliance with the performance standards set forth in the service contract through the following monitoring requirements: audits of contractor employees and documents; unannounced site visits, inspections and field observation; customer surveys; DOT Section 15 performance data; inspection of vehicles and vehicle maintenance records; and required monthly management performance reports.

Current Paratransit Method

Adopting a customer-focused approach to service delivery, MARTA negotiated a 5-year contract with the local Amalgamated Transit Union (ATU) establishing a Paratransit Services unit within the Division of Operations and Development. MARTA believed that the paratransit service could be improved if operated directly. A more efficient, customer-focused service has always been MARTA's primary goal; but, the high cost of union labor presented a barrier to directly operating the service until recent successful negotiations. Three represented

classifications were established: paratransit operator, mechanic, and service person. The agreement between MARTA and ATU embraced the DAVE contract operators. The agreement required that MARTA hire the existing qualified DAVE operators as paratransit drivers, acknowledging their DAVE seniority status to determine pay rate and vacation accrual. Therefore, the operators hired from DAVE average a pay rate of approximately \$10.40 per hour.

The agreement established a rate of pay that is a lower-scale wage than the fixed-route operators, with new paratransit operators being hired as part-time operators at a starting wage of \$8.40 per hour. Full-time operators, with the exception of the DAVE operators, must be promoted from the part-time ranks and begin at the same \$8.40 wage rate.

Several decision factors were responsible for the negotiations with ATU: 1) more direct control over the operating design; 2) improved customer focus through the removal of the third-party contractor, allowing a closer, more responsive relationship with the customer; 3) more direct control over operating costs, service scheduling, and system productivity, and 4) better assurances that MARTA could maintain on-going ADA compliance.

Costs

MARTA's operating budget has increased largely due to meeting full compliance with ADA. Effective January 16, 1997 paratransit service hours were extended to be consistent with the fixed-route service hours. The Paratransit Start-up Budget on March 1, 1997 was authorized at \$5.5 million. The revenue hours operated during the few months of directly operated service project an estimated 157,257 revenue hours annually. Projected annual ridership is an estimated 172,983 passengers, yielding an average of 1.10 passengers per revenue hour. The expected cost per passenger trip is estimated to be \$31.80 (a marginal increase over the paratransit service delivery).

Performance Data

In the past year, MARTA has experienced an extraordinary growth in demand. The following service expansion has occurred: 75 percent increase in the number of revenue hours operated; 129 percent increase in the average Saturday ridership; 160 percent increase in the average Sunday ridership; and 52 percent increase in the number of certified customers. Since the start-up of directly operated service, the system performance has also improved. On-line performance continues to average 94 percent; system productivity has improved to an average of 2 passengers per revenue hour; MARTA has experienced no monthly trip denials; and has successfully maintained compliance with ADA provisions.

As a new program, MARTA has experienced an increase in accidents per 100,000 (largely due to the significant number of new operators and the expanded service requirements) and passenger complaints have risen slightly due to transitioning

and growth related problems typically present in a new start. MARTA expects rapid improvement in these areas as the performance requirements previously placed on the contractor's operators continue to apply to the MARTA operators.

Ensuring Quality Service

To ensure performance, MARTA has established a performance-based incentive program that rewards individual operators for on-time performance, quality customer service with no complaints, adherence to scheduled manifests, maintaining required communication with radio dispatchers, uniforms and appearance, safety performance and individual route productivity. Operators are subject to disciplinary consequences for not maintaining quality performance.

Paratransit operators are required to attend mandatory monthly safety meetings. Each operator's performance is evaluated through random, direct field observation, customer comments, periodic on-board ride checks, and on-going observation of the vehicles throughout the service area by MARTA's fixed-route supervisors, instructors, and safety officers.

Efficiency and Effectiveness

After four months of direct operation of the service, MARTA rates the overall system improvement and performance at 4 out of a possible 5.

PACE SUBURBAN BUS ARLINGTON HEIGHTS, ILLINOIS

MULTIPLE CONTRACTS WITH PRIVATE CARRIERS

Pace Suburban Bus System is a large, suburban transit agency serving more than one million passengers annually. Pace Suburban Bus System Dial-A-Ride was initiated by the RTA in 1976 as a demonstration and was established as an operating system in 1984. In 1986, Pace started paratransit service to passengers with mobility impairments in 1987 through contracts with private providers. This program evolved to become Pace's ADA Paratransit Program.

ADA Paratransit Service Delivery

ADA-eligible passengers, senior citizens, and the general public are eligible to ride. Pace ADA paratransit service is a curb-to-curb service for the exclusive use of persons determined ADA-eligible. The service is provided through contracts with multiple private carriers that provide reservations, scheduling,

and dispatching and operating vehicles. Contractors are paid a flat rate per trip and an hourly rate. For all ADA paratransit services and all Dial-A-Ride services operated by private providers under direct contract with Pace, payment is based on an hourly rate. Pace Paratransit vehicles are assigned to the contractor for the delivery of these services.

Costs

Pace's paratransit operating budget for 1996 totaled \$14.7 million—\$8 million in Dial-A-Ride and \$6.7 million in ADA services. The annual one-way paratransit trips total 1,521,000—1,197,000 Dial-A-Ride trips and 324,000 ADA trips, including companion trips. Cost per passenger trip averages \$9.67–\$6.79 for Dial-A-Ride trips and \$20.54 for ADA trips. The minimum Pace fare requirement is \$.65 for seniors, persons with disabilities, students, and children under age 7 and \$1.30 for all other passengers. Fares charged to the passengers vary among the Dial-A-Ride projects based on policies established by the entities helping to fund them. In some cases, the local funding partner provides additional funding to cover the Pace minimum fare requirement. Fares charged to the passengers on the various Dial-A-Ride projects range from free to \$2.00 per one-way trip.

Performance Data

Annual vehicle miles total 7,580,100–4,070,500 in Dial-A-Ride miles and 3,509,600 in ADA trip mileage. Annual vehicle hours total 482,648–251,400 in Dial-A-Ride hours and 3,509,600 in ADA trip hours. Productivity (riders per hour) totals 3.2, with productivity of 4.65 for Dial-A-Ride and 1.33 for ADA. The annual trip denial rate is less than 1 percent overall; while annual on-time performance remains at 95 percent. Preventable accidents total 1.31 per 100,000 miles. There were approximately 66 customer complaints per month—31 complaints about Dial-A-Ride service and 35 ADA complaints.

Contracts

Most all paratransit contracts include performance standards covering on-time performance, missed trips, productivity standards, call-taking standards, preventive maintenance standards, and response time. On-time performance requires pickups within 15 minutes of scheduled time to be considered on time. Contract standards range from 90 percent to 95 percent required on-time service. Liquidated damages are assessed for each trip meeting the standard at an amount equal to 40 percent of the contracted hourly rate. Missed trips are those not completed or trips more than 1 hour late. Liquidated damages are assessed at twice the amount of the contractors' hourly rate. Minimum productivity standards, defined as trips per hour, vary among contractors. Productivity requirements range from 0.9 to 6.5 trips per hour. Liquidated damages are assessed for each tenth of a point below the standard

rate of 1 percent of the contractors' monthly billing. One contract includes a bonus for productivity above the minimum standard. A bonus of 1 percent of the contractor's monthly billing is awarded for each tenth of a point above standard. Each call to schedule or cancel a ride must be picked up within three rings. No caller can be placed on hold for more than 45 seconds. No liquidated damages are associated with this standard. Basic preventive maintenance standards require service no less than 3,000 miles or every 3 months, whichever comes first. Liquidated damages vary, some contracts call for \$50 per day and some call for \$50 per day or \$.33 per mile. For services entailing same-day scheduling, as opposed to one-day in advance reservations, contracts establish maximum limits from the time the ride request is made to the time pickup is completed. Fifty percent of requests must be picked up within 15 minutes. Eighty-five percent of requests must be picked up within 30 minutes. No liquidated damages are assessed.

Ensuring Quality Service

Methods used to ensure contractor compliance with contract terms include: random phone calls to users (primarily for ADA paratransit users), contractor audits, unannounced site visits to observe operations, DOT Section 15 performance data, vehicle/maintenance records inspection, and monthly management performance reports. An effort is made to ensure that a new contractor is identified prior to the end of one contracting term, so that adequate time is available to thoroughly prepare for the new contractor start-up. Pace Paratransit Department staff works closely with the new contractors, as they prepare for start-up on all aspects of delivery. Also, during the first several weeks of the new contract terms, Pace staff spends a considerable amount of time at the contractor's facility to assist with the start-up process, including handling inquiries from customers. Notice to passengers of a change in the paratransit service provider are posted on buses just before the change in service provider.

Pace staff regularly perform desk audits of the on-time performance of services provided by private operators under direct contract with Pace. The audits typically include a review of 25 percent of the driver logs (or trip tickets) per month. Additional reviews (including field monitoring) are done if the initial review indicates the performance is below contract minimum standards and/or as part of staff follow-up work in response to passenger complaints.

Passenger safety and driver courtesy are monitored in several ways. Supervisory personnel at each of the private providers under direct contract with Pace perform on-road monitoring of their drivers. Also, all paratransit operators are required to adhere to the agency's accident/incident reporting requirements. Pace staff does follow-up work, as necessary, on such reports, as well as on passenger safety. Pace follows written procedures for responding to paratransit customer complaints. A 5-day Paratransit Driver Training Program is offered for persons driving in Pace-funded services to ensure that drivers are trained to proficiency.

Efficiency and Effectiveness

Pace rates the overall cost-effectiveness of its paratransit services delivery at 4 out of a possible 5. They are in the process of implementing an automated scheduling system at their three largest ADA services projects. Based on positive experience with the implementation of the system at the first project in late 1996, they expect improved efficiency when implementation is completed at the other two projects. Pace Suburban Bus therefore rates the efficiency of its paratransit program at the highest level: 5 out of a possible 5.

**WASHINGTON AREA METROPOLITAN
TRANSIT AUTHORITY
WASHINGTON, D.C.**

BROKERAGE

The Washington Metropolitan Area Transit Authority, WMATA, was created in 1967 by an interstate Compact among the State of Maryland, the Commonwealth of Virginia, and the District of Columbia. Compact members include Washington, DC; Montgomery County and Prince George's County, Maryland; and Alexandria City, Arlington County, Fairfax City, Fairfax County, and Falls Church, Virginia.

WMATA is a large, urban-suburban system, serving over 107,000,000 passengers annually. Eleven public transit agencies operate fixed-route systems to provide mass transit services in the WMATA region. WMATA operates two modes of fixed-route transportation: Metrorail and Metrobus. These systems are regional, interjurisdictional services, concentrated in the District of Columbia but also connecting the District with surrounding communities, some very far outside of the District, and the communities with each other. A number of the jurisdictions in Maryland and Virginia also operate or contract for the operation of their own fixed-route services. They are: Ride-On, Montgomery County, Maryland; The Bus and CONNECT-A-RIDE in Prince George's County, Maryland; Fairfax Connector, Reston Internal Bus System, and Tysons Shuttle in Fairfax County, Virginia; CUE in The City of Fairfax; DASH in the City of Alexandria; and Arlington Trolley in Arlington County.

ADA Paratransit Service Delivery

Prior to 1994, WMATA did not provide paratransit services for individuals with disabilities. To implement the ADA complementary paratransit requirements, WMATA elected a regional brokerage service. Many of the member jurisdictions had considerable experience in paratransit service delivery. To capture that experience, the Compact members believed that a central regional configuration would enable local control over service provision and cost. Arrangements for the provision of local level service would vary by jurisdiction, depending on

whether the jurisdiction was involved in the provision of general purpose paratransit. Five of the eight jurisdictions (Montgomery, Prince George's, and Fairfax Counties and the cities of Fairfax and Alexandria) operated paratransit services that were included in the regional paratransit agencies. Their paratransit services are referred to as "core services" and serve as the carriers of first choice in their respective jurisdictions. ADA trips that cannot be accommodated by the cores are provided by the WMATA regional system.

The regional system fills gaps such as intra-jurisdictional trips in non-core areas, most of the region, and those that cannot be handled by the core carriers in their areas. This method was selected for economic reasons and its ease of implementation in consideration of the existing regional system. MetroAccess is administered and operated through a contract with DAVE Transportation, which serves as broker and schedules trips for core and contract carriers. MetroAccess commenced service in May 1994 with no major service delivery changes.

MetroAccess provides curb-to-curb service to ADA-eligible passengers only. As the regional broker, DAVE handles telephone requests, schedules trips, dispatches and operates vehicles, and conducts ADA paratransit eligibility determinations. Participating contractors are paid an hourly rate. Vehicle usage, training, fuel, labor, and mileage are factors used to determine the contractor's actual cost of service delivery. WMATA contractors have 51 vehicles providing paratransit service. The vehicles are used to transport passengers within and between the various jurisdictions. Service is provided using a variety of vehicles that are owned and maintained by the participating carrier including vans, converted vans, and body-on-chassis vehicles.

Costs and Performance Data

WMATA's annual paratransit operating budget was \$7.7 million for fiscal year 1996. The annual one-way paratransit

passenger trips total 172,700, with 60,600 provided by the core carriers and 112,100 provided through contracts. The average cost of a passenger trip was \$44.58. The average one-way passenger fare was \$2.20. Annual vehicle miles averaged 1,986,200. Monthly trip denial rates averaged around 4.5 percent. Monthly on-time performance was 89 percent.

Ensuring Quality Service

To ensure compliance with contract terms, contractors are audited: unannounced site visits are made, customer surveys are completed, DOT Section 15 performance data compiled, vehicle/maintenance records inspected, monthly performance reports maintained, and weekly performance review meetings with contractors are held. Contract terms do not include incentives or penalties for service delivery performance.

On-time performance is monitored by manifest reconciliation, on-street monitoring, and reviews of customer complaint and comment records that are maintained. Passenger safety is monitored by on-street monitoring, prompt investigation of accidents, and reviews of customer complaints and comments. Driver courtesy is monitored by on-street monitoring and reviews of customer complaints and comments. WMATA has written procedures for responding to paratransit customer complaints. Requiring drivers to possess valid commercial driver's licenses and contractors to train staff as contractually specified are methods implemented to ensure that paratransit drivers are trained to proficiency.

Efficiency and Effectiveness

In terms of paratransit services delivery cost-effectiveness, WMATA rates its service at 3.5 on a scale of 1 to 5. In terms of quality of service, load factor (use of vehicles) is an area that needs improvement. Overall, the system rates itself at 4.5 out of a possible 5.

CONCLUSIONS

Financial constraints and growing paratransit demand have prompted public transit agencies to review and reassess their methods for providing ADA paratransit services. This synthesis was undertaken to provide information about the operational practices used by public transit agencies to provide ADA paratransit services and to identify factors that influenced the transit agencies' selection of service delivery methods. This chapter reviews the findings to provide a snapshot of ADA paratransit contracting and service delivery practices among respondent transit agencies and a further understanding of how these service delivery methods were chosen.

The information presented was collected from survey responses of 28 public transit agencies that have responsibility for providing ADA complementary paratransit services. This response represents a 48 percent return rate of the surveys distributed and about 5 percent of the entire population of public fixed-route transit operators. These agencies range in size from those serving populations of over 1 million to areas with populations less than 50,000. The responses are considered representative of large urban transit agencies and under-representative of the smallest agencies, which, due to lower population density, have different patterns of transit use than the larger systems.

Most of the transit agencies surveyed were providing paratransit services before passage of the ADA. Five respondent agencies that established paratransit programs in response to ADA requirements contract some portion of the service to the private sector. The majority of responding agencies contract out all paratransit trips. Slightly more than one-fourth supplement direct operation of paratransit services with private sector contracts. Only 14 percent of those surveyed directly operate all paratransit services. Eleven of the transit agencies responding have changed their fixed-route status to avoid the ADA paratransit requirement.

The majority of the transit agencies that contract out service delivery have traditional service contracts with a single for-profit carrier for dedicated paratransit service delivery. Nearly half have contracts with multiple private providers for paratransit service. Two transit agencies that responded have established brokerage arrangements and two have established user-side subsidy programs. Five transit agencies coordinate paratransit service delivery with other entities. Study findings cannot be used as the basis for a precise comparison between service delivery method and size, but several trends emerged. Small-urban systems report the greatest use of direct operation, contracts with nonprofit providers, and coordinated paratransit service delivery. Mid-sized systems are making greater use of multiple providers. The majority of large urban systems contract with multiple providers for paratransit services.

Transit agencies are continuing to reassess and evolve their methods for paratransit service delivery. Since the implementation

of the ADA paratransit requirements, one-fourth of those surveyed have changed their service delivery method at least one time. Compliance with the ADA paratransit requirements seems to be encouraging privatization. Most of the transit agencies that responded to the survey contract services out to private, for-profit carriers. Information from this survey indicates that the use of nonprofit carriers is dwindling because of their lack of capacity to meet escalating paratransit demand. All respondent transit agencies that established their paratransit programs in response to the ADA contract out all or a portion of service delivery. Increasing numbers of transit agencies are conducting their own reservations and scheduling to control passenger usage. Some transit agencies may be reconsidering direct operation using unionized, lower-paid paratransit drivers.

According to a majority of respondents, the single most influential factor on the transit agencies' method of paratransit service delivery is cost. Multiple respondents attest to the persistent influence of cost in selecting methodology and contractors. In addition to cost, transit agencies responding to the survey cited equipment availability and contractors' ability to expand to meet the growing demand for paratransit service. A provider's prior experience with paratransit service delivery is reported as a prime reason for agencies that had never operated paratransit to contract out for its delivery. Maintaining control over service quality and demand management are reported as major concerns for several of the larger systems responding.

The majority of responding transit agencies provide curb-to-curb services to ADA-eligible passengers only. All of the agencies transport passengers in accessible vans; some agencies supplement vans with a broad mix of vehicles, including mini-buses, taxis, and sedans. The average paratransit vehicle fleet ranges in size from 15 vehicles in small agencies, 34 vehicles in medium-sized agencies, to 179 vehicles in large urban transit agencies. Survey responses indicate that paratransit service delivery costs vary according to transit agency size. On the average, annual paratransit budgets range from \$55,602 in the smallest agencies to \$10 million in the largest. The average cost per trip ranges from \$10.90 to \$26.03 based on transit agency size, paratransit service method, and level of demand. The average passenger fare is slightly less than \$2.00 per one-way trip. Generally, the transit agencies surveyed are denying about 2 percent of requested trips due to lack of capacity. Productivity is relatively low, averaging less than two passengers per hour. Average on-time performance of responding agencies ranged from 90 to 95 percent.

For large agencies, contracting with multiple carriers was reported to be the most efficient and effective paratransit service delivery method. The smaller agencies viewed direct operation models as most efficient and effective. Combination

models were ranked second in efficiency and effectiveness by large and small agencies, and least efficient by medium-size agencies. Medium-size agencies view the traditional service model for dedicated service delivery as more efficient and effective than both large and small transit agencies.

Most responding transit agencies contract out the administration and operation of their paratransit programs including reservations, scheduling, dispatching, and vehicle operation. The majority pay contractors for paratransit services on an hourly rate basis with fixed start and end times. When negotiating contracts, transit agencies primarily factor in the cost of labor, fuel, and mileage. Other cost determinants include insurance, maintenance, administration, facility rental/leasing, parts, management, and equipment depreciation. Most of the agencies surveyed that privatize their paratransit services have retained the same contractor over a number of years. For others, most contracts include start-up clauses to assist new contractors during a designated transitional period. The majority include a system of financial penalties for failure to comply with performance standards and some have financial incentives for superior performance.

To ensure quality service, the majority of responding transit agencies use comprehensive monitoring strategies to make sure that contractors adhere to the established performance standards. All but one of the respondents have mandatory driver training requirements. Many require that paratransit drivers complete passenger assistance techniques and disability sensitivity training. Although the majority do not have formal customer complaint procedures, they encourage customers to call or write to report complaints.

Transportation options for individuals with disabilities have improved since the passage of the ADA. Nationwide, transit operators are providing enhanced levels of accessible transportation, including greatly improved paratransit services. Since the majority of transit agencies have reported reaching compliance with the ADA paratransit requirements, paratransit services should be comparable to fixed-route services. But implementation is clouded by budget constraints. Federal financial assistance has increasingly diminished at the same time that state and local budgets have decreased. Reduced passenger revenue from declining ridership, compounded by competing priorities, has made ADA paratransit services a difficult proposition to fund. To further compound such bleak financial circumstances, paratransit demand continues to escalate.

These circumstances prompted transit operators to review and reassess their methods for providing paratransit services. The search for improved cost efficiencies has promoted experimentation with a variety of paratransit service methods. More than one-quarter of the transit agencies surveyed changed their service delivery methods one or more times. Consistent with other recent study findings, ADA paratransit has expanded the private sector role in paratransit service delivery (21). A majority of transit agencies privatize all paratransit services. There is increased use of multiple private carriers, particularly in large urban areas.

The search for improved cost efficiencies and maximization of resources has produced better designed contracts and close scrutiny of contractor performance. Prior to ADA, many paratransit programs were operated in a piecemeal, ad hoc manner. But ADA compliance and financial pressures have changed paratransit service delivery. Contracts for paratransit service contain clearly delineated performance standards and provide financial incentives for stellar performance and stiff financial penalties for unsatisfactory performance, including the ultimate penalty of contract cancellation. Contractor performance comes under closer scrutiny through a series of comprehensive monitoring techniques. Even with tight contract monitoring, some systems are now reconsidering the possibility of direct operation with reduced labor costs to reduce paratransit service costs. Transit operators have also implemented various strategies, such as travel training and feeder services, to manage paratransit demand. Transit operators are making ADA compliance a priority. ADA has made paratransit a transit funding priority. As a result, ADA paratransit services are administered and operated in a more systematic and efficient manner than earlier paratransit services.

To address issues raised by this synthesis, the following suggestions for further study are offered:

- In order to obtain a more definitive picture of ADA paratransit contracting and service delivery methods nationwide, a comprehensive survey could be conducted of the entire population of public transit agencies that provide ADA paratransit services, to examine their practices for compliance with the ADA requirements and methods for ADA paratransit delivery. Particular attention to identifying coordinated and integrated paratransit service delivery methods would be useful.
- The use of unionized, lower-paid paratransit drivers may have a significant influence on paratransit services methodology and privatization. Immediate follow-up research is needed to examine a broad range of labor issues and their effect on the delivery of ADA paratransit services, and specifically to determine the prevalence of two-tier pay scales among the population of public transit paratransit providers. In addition to surveying transit operators, this research might survey drivers, transit union officials, and representatives of the private sector to ascertain their attitudes toward two-tier pay scales.
- The responses of this study are limited to the perceptions of representatives of the public transit industry. To obtain a more balanced perspective, research regarding service quality and the effectiveness of various methods of paratransit service delivery could be conducted with the customers who use paratransit services.
- Mechanisms are needed to promote information exchange about paratransit contracting and service delivery methods among public transit operators, including the development and dissemination of a best practices manual and national workshop.
- A review of the technology available to improve the delivery of accessible transportation and its impact on the efficiency and effectiveness of ADA paratransit service delivery is needed.

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APPENDIX A

Survey Instrument

PARATRANSIT CONTRACTING AND SERVICE DELIVERY METHODS Questionnaire

General Directions

The purpose of this survey is to obtain information about paratransit contracting and service delivery methods. This questionnaire will solicit information on the range of paratransit service contracting practices, transit system assessments of these practices, and factors that influenced the selection of paratransit contracting and service delivery methods. Please complete the entire questionnaire and return it to the address below by _____. Your timely attention to this survey is greatly appreciated.
Thank you.

Individual Completing the Questionnaire

Your Name _____
Your Title _____
Department _____
Transit System _____
Address _____
Telephone _____

I. Describe your Transit System

Please describe your transit system by checking the appropriate box(es):

1. Transit System Size

- Population Service Area
☐ Under 50,000
☐ 50,000 - 199,999
☐ 200,000 - 999,999
☐ 1,000,000 or greater

2. Type of Community

- ☐ Urban
☐ Suburban
☐ Rural

III. Choosing a Paratransit Services Delivery Method

Current ADA Paratransit Services Delivery

Answer the following questions by checking the appropriate box (es):

ADA Paratransit Services Delivery

3. Did your transit system provide paratransit services for individuals with disabilities and/or senior citizens prior to 1990?

- ☐ Yes
☐ No

4. If yes, what methods of paratransit services delivery was utilized? Check all that apply:

Direct Operation

- ☐ Transit System Direct Operation
☐ Combination Transit System Operation/Contract
☐ Combination Transit System Operation/User-side Subsidy

Brokerage

- ☐ Transit System-Operated Brokerage
☐ Transit System-Contracted Brokerage

Traditional Service Contracts

- ☐ Transit System Contract with Non-Profit Provider
☐ Transit System Contract with Private Provider
☐ Transit System Contract with Multiple Providers
☐ User-side Subsidy (Riders' Choice)

Coordination

- ☐ Coordination with HHS Agencies
☐ Coordination with Other Agencies

Other

5. What method of paratransit services delivery did your transit system select to implement the complementary paratransit requirements of the ADA? Check all that apply.

- Direct Operation
- ☐ Transit System Direct Operation
 - ☐ Combination Transit System Operation/Contract
 - ☐ Combination Transit System Operation/User-side Subsidy

- Brokerage
- ☐ Transit System-Operated Brokerage
 - ☐ Transit System-Contracted Brokerage

- Traditional Service Contracts
- ☐ Transit System Contract with Non-Profit Provider
 - ☐ Transit System Contract with Private Provider
 - ☐ Transit System Contract with Multiple Providers
 - ☐ User-side Subsidy (Riders' Choice)

- Coordination
- ☐ Coordination with HHHS Agencies
 - ☐ Coordination with Other Agencies

Other

6. Has your transit system changed to paratransit services delivery model in the last three (3) years?

- ☐ Yes
- ☐ No

If yes, indicate the paratransit services delivery model currently utilized. Check all that apply. If no, continue to question 7.

- Direct Operation
- ☐ Transit System Direct Operation
 - ☐ Combination Transit System Operation/Contract

- ☐ Combination Transit System Operation/User-side Subsidy

Brokerage

- ☐ Transit System-Operated Brokerage
- ☐ Transit System-Contracted Brokerage

Traditional Service Contracts

- ☐ Transit System Contract with Non-Profit Provider
- ☐ Transit System Contract with Private Provider
- ☐ Transit System Contract with Multiple Providers
- ☐ User-side Subsidy (Riders' Choice)

Coordination

- ☐ Coordination with HHHS Agencies
- ☐ Coordination with Other Agencies

7. Why did your transit system select the current method for paratransit services delivery? Please list the major decision factors:(If you need additional space, please use the back of this survey page.)

a. _____

b. _____

c. _____

d. _____

e. _____

f. _____

g. _____

III. Describe your Paratransit Services Program

To answer the following questions, check the appropriate boxes:

Level of Paratransit Service

8. What level of paratransit services are provided? Check all that apply.

- ☐ Curb to Curb
- ☐ Door to Door
- ☐ Door through Door

9. Which passengers are eligible to ride?

- ☐ ADA-eligible
- ☐ Senior Citizens
- ☐ HHS Agency Clients
- ☐ General Public
- ☐ Other: Please specify _____

IV. Describe your Paratransit Services Contract

To answer the following questions, check the appropriate boxes or fill in the missing blanks:

Scope Of Services

10. What services are provided through contracts with private and/or non-profit transportation providers? Check all that apply.

- ☐ Receives telephone requests for paratransit service
- ☐ Schedules Trips
- ☐ Dispatches Vehicles
- ☐ Operates Vehicles
- ☐ Conducts ADA Paratransit eligibility determinations
- ☐ Provides travel training

Method of Compensation

11. How are your contractors paid? Check all that apply. Explain.

- ☐ Flat per trip rate
- ☐ Hourly rate
- ☐ Mileage rate

12. When negotiating contracts, what factors are used to determine the contractor's actual cost of service delivery, i.e., fuel, labor, mileage, etc.?

Vehicle Operation

13. Enter the number of vehicles used to provide paratransit services? _____

14. Are the vehicles used to transport passengers other than transit system passengers?

- ☐ Yes
- ☐ No

15. If yes, please describe: _____

16. What mix of vehicles are used, i.e., cars, vans, etc.? _____

IV. Describe Your Paratransit Program Performance

To answer the following questions, fill in the missing blanks.

Question	Transit System Provided	Contract	Total
17. Annual Paratransit Operating Budget	\$	\$	\$

18. Annual One-Way Paratransit Passenger Trips			
19. Cost per Passenger Trip (To compute the cost of a passenger trip, divide the annual operating budget by the annual number of passenger trips.)	\$	\$	

20. One-Way Passenger Fare _____

21. Annual Vehicle Miles _____

22. Annual Vehicle Hours _____

23. Productivity _____
(To compute productivity, divide the annual passenger trips by the annual vehicles hours.)

24. Monthly Trip Denial Rate _____ %

25. Monthly On-Time Performance _____ %

26. Monthly Accidents per Mile _____
(Vehicular and Personal Injury)

27. Monthly Customer Complaints _____

V. Ensuring Reliable Service

28. What methods are used to ensure contractor compliance with contract terms?
Check all that apply:

- ☐ Random Phone Calls to Users
- ☐ Audits of Contractor
- ☐ Unannounced On-Site Visits to Observe Operations
- ☐ Customer Surveys
- ☐ DOT Section 15 Performance Data
- ☐ Vehicle/Maintenance Records Inspection
- ☐ Monthly Management Performance Reports

29. What methods are used to ensure the continuity of experience between one contractor (contracting term) and the next one?

30. Do contract terms include incentives and/or penalties for service delivery performance? Check appropriate box:

☐ Yes

☐ No

31. If yes, please describe _____

To answer, fill in the missing blanks:

32. How is on-time performance monitored? _____

33. How is passenger safety monitored? _____

34. How is driver courtesy monitored? _____

35. Does your transit system have written procedures for responding to paratransit customer complaints? (Check appropriate box:

- ☐ Yes (Please attach copy)
☐ No

36. What methods are implemented to ensure that paratransit drivers are trained to proficiency?

37. Please attach copies of policies or standard operating procedures to ensure reliable paratransit services delivery.

VIII. Evaluate Your Paratransit Program

Efficiency

38. Is your method of paratransit services delivery cost-efficient?

Rate the efficiency of your paratransit program on a scale of 1-5.
 Circle the appropriate number (1-lowest, 5-highest):

- 1 2 3 4 5

Effectiveness

39. According to the following factors is your method of paratransit services delivery effective in providing quality service ? Check appropriate box:

- ☐ Yes ☐ No Average Passenger Wait Time (Vehicle arrival within 15 minutes of scheduled time).
☐ Yes ☐ No Average Passenger Ride Time
☐ Yes ☐ No On-time Performance
☐ Yes ☐ No Load Factor (Efficient Use of Vehicles)
☐ Yes ☐ No Contractor No-Shows

40. Rate the effectiveness of your paratransit program on a scale of 1-5.
 Circle the appropriate number (1-lowest, 5-highest):

- 1 2 3 4 5

Thanks for your help!

Please return this survey and all documents by _____ (Date)
 to:

Dr. Rosalyn M. Simon
 P.O. Box 2666
 Columbia, MD 21045

APPENDIX B

Response by Transit Agency, City, and State

Athens Transit, Athens, Georgia
 Beaver County Transit Authority, Rochester, Pennsylvania
 Bettendorf Transit, Bettendorf, Iowa
 Broward County Transit, Pompano Beach, Florida
 Chicago Transit Authority, Chicago, Illinois
 City of Anderson Transportation System, Anderson, Indiana
 Connecticut Transit, Hartford, Connecticut
 Dallas Area Rapid Transit, Dallas, Texas
 Danville Mass Transit, Danville, Illinois
 Davenport CitiBus, Rock Island, Illinois
 Eagle Transit, Kalispell, Montana
 Iowa City Transit, Iowa City, Iowa
 Kosciusko Area Bus Service, Warsaw, Indiana
 Mass Transit Administration, Baltimore, Maryland
 Metropolitan Atlanta Regional Transit Authority, Atlanta,
 Georgia

Metropolitan Evansville Transit System, Evansville, Indiana
 Metropolitan Transit Authority, Nashville, Tennessee
 Metropolitan Transit Development Board, San Diego,
 California
 Montgomery Area Transit System, Montgomery, Alabama
 PACE Suburban Bus, Arlington Heights, Illinois
 Pima County Transit, Tucson, Arizona
 Pinnellas Sun Coast Transit Authority, Clearwater, Florida
 Riverside Transit Agency, Riverside, California
 Rock Island County Metro Mass Transit District, Rock Island,
 Illinois
 San Mateo County Transit District, San Carlos, California
 South Coast Area Transit, Oxnard, California
 VIA Metro Transit, San Antonio, Texas
 Washington Metropolitan Area Transit Authority,
 Washington, DC

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The National Academy of Sciences is a nonprofit, self-perpetuating society of distinguished scholars engaged in scientific and engineering research, dedicated to the furtherance of science and technology and to their use for the general welfare. Upon the authority of the charter granted to it by the Congress in 1863, the Academy has a mandate that requires it to advise the federal government on scientific and technical matters. Dr. Bruce Alberts is president of the National Academy of Sciences.

The National Academy of Engineering was established in 1964, under the charter of the National Academy of Sciences, as a parallel organization of outstanding engineers. It is autonomous in its administration and in the selection of its members, sharing with the National Academy of Sciences the responsibility for advising the federal government. The National Academy of Engineering also sponsors engineering programs aimed at meeting national needs, encouraging education and research, and recognizes the superior achievements of engineers. Dr. William A. Wulf is president of the National Academy of Engineering.

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